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MAY, 1941 - 25 CENTS

# AMERICAN BUILDER

TECHNOLOGY

EDITED BY

JOHN C. L. BERRY

MAY - 1941

DEPT. OF

AND  
BUILDING  
AGE

THE WORLD'S GREATEST BUILDING PAPER



**BIRD'S-EYE VIEW OF NEWEST IN HOME BUILDING**

5 Rooms, Garage, Patio Garden on Biscayne Bay, Miami. See page 60.

# "SOLD" signs go up fast ON CELOTEX-INSULATED HOMES!



*Talbot Building Company's Colonial Village, Pikesville, Maryland.*

## **Celotex Guaranteed\* Insulation Proves Important Selling Aid to Builders in All Parts of the Country**

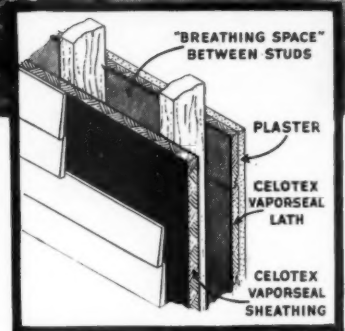
FROM New York and Maryland—from Ohio and Michigan and Illinois—from Missouri and Kansas and California come photographs and letters from operative builders, telling how Celotex Guaranteed\* Insulation helps them sell more houses faster.

There's selling power in the *extra value* for the money they are able to give by making one material do two jobs. Celotex Vapor-seal Sheathing replaces other sheathing *and* other insulation, *at one cost!* Celotex Vapor-seal Lath

replaces other lath *and* other insulation, *at one cost!*

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# AMERICAN BUILDER

and Building Age

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# We notice a growing respect for the specialist...



**W**AR is bringing home the fact that you either know a little about a lot of things, or a lot about a few. The military aviator and National Gypsum belong in the latter category. Both are *specialists*. Since the day this company started, National has gone down the line for *specialization*. It helped us grow, and it has helped a lot of other fellows, too.

*Take the dealer for instance.* National has given him a line of superior products to sell at a fair profit under a constructive dealer policy. With gypsum wallboard, for example, National has set new standards for lightweight and strength. The "Gold Bond Floating Wall" is another example. A unique system that minimizes plaster cracks and reduces sound transmission, it's the biggest forward step in wall construction in generations. And it is patented for exclusive sale by the Gold Bond dealer!

*Take the builder:* National research and specialization has brought him better products, easier handling, surer results, lower costs and larger profits. On big jobs the exclusive 2" Gold Bond solid partition system saves space by the roomful. On small jobs the exclusive Gold Bond arch bead cuts and bends on the job to form perfect arches. And these are just two illustrations!

*Take the architect:* Gold Bond research is constantly providing him with new techniques and ideas in gypsum, lime, metal lath, sound control, insulation and casein paint products. And what's more he knows that if he specifies Gold Bond for the entire job the responsibility is centered.

*Take the owner:* He pays the bill, and though he may not know a corner bead from a bag of plaster, he knows that National is 100% responsible when Gold Bond products are used exclusively.

The net of it is this. Gold Bond today is the only manufacturer specializing exclusively in wall and ceiling materials.

The standards for the industry are set in Gold Bond's laboratories and 21 model plants. There is a *better* Gold Bond product for every wall and ceiling problem. And Gold Bond offers you exclusive methods of construction that guarantee better result.

You get the newest and the best from Gold Bond every time. And to make sure, National has a staff of more than 300 trained representatives who can really help you solve your wall and ceiling problems. Write today for 1941 Gold Bond Handbook, describing new methods of wall and ceiling construction. National Gypsum Company, Buffalo, N.Y.

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# PUBLISHER'S PAGE

## "Stabilizing Rents"

**P**RESIDENT ROOSEVELT has created the "Office of Price Administration and Civilian Supply" with Leon Henderson as administrator. The order of April 11, creating it directed it to include "programs \* \* \* of stabilizing rents \* \* \* and advise on such additional legislation relating to rents as may be necessary or desirable." By "stabilizing rents" obviously is meant hindering or preventing advances in them.

The administration's only *ostensible* purpose in restricting prices and rentals is to prevent *inflation*, which is extremely desirable. Nothing is so economically disastrous to a nation as real inflation—that is, extreme advances in prices and rentals. But what *causes* such advances in prices and rentals? And *should* or *can* any government do or allow all that *causes* inflation, and at the same time *prevent* it?

**T**HE principal cause of inflation always is government *expenditures* vastly exceeding government *revenues* derived from taxation. Our federal government is and should be vastly increasing expenditures for defense; and, therefore, to prevent inflation it should be greatly increasing taxes, which it is doing. But to prevent inflation the federal, state and local governments should all also be greatly *reducing all expenditures excepting for defense*. And, on the contrary, the combined *non-defense* expenditures of all our governments are still *increasing*. Thus, all of them, especially the federal government, are doing all they can, by reckless spending, to *cause* inflation.

Wages—directly and indirectly—are 80 per cent of the costs of industry as a whole, exclusive of taxes. (The *labor* costs of building include, of course, the wages in the prices of *materials* as well as those paid directly for construction.) Therefore, advances in wages also necessarily tend to cause inflationary advances in prices and rentals. But is the administration trying to prevent increases in labor costs? Quite the contrary. Labor

unions have been exerting every kind of pressure, including lawless violence, on numerous industries (*especially* those producing for defense) to increase labor costs; but the administration has *encouraged* this. As one result, the basically important steel industry on one day recently announced an advance in wages—and Administrator Henderson on the very next day forbade, until further notice, an advance in its prices.

**I**S THE administration following these *seemingly* contradictory policies *solely* to provide for defense and prevent inflation? Or for some *other* purpose, also? Well, as combined, they increase *government-owned* property,—i. e., public works and government housing—and *curtail the net income from every kind of privately-owned property*. Obviously, for example, if (1) the *labor costs* of building materials and construction are increased, (2) *taxes* on privately-owned buildings (including homes) are increased, and then (3) rentals are restricted, the result necessarily is reduction of the net income—"profits"—that can be derived from owning and renting apartments and houses.

And thus *socialism* is promoted—i. e., (1) *government* property is increased by spending taxes from *private* property; (2) increase of private property is restricted by reducing the income from it; and (3) equalization of incomes is promoted both by reducing incomes from business and private property and increasing the pay for manual labor.

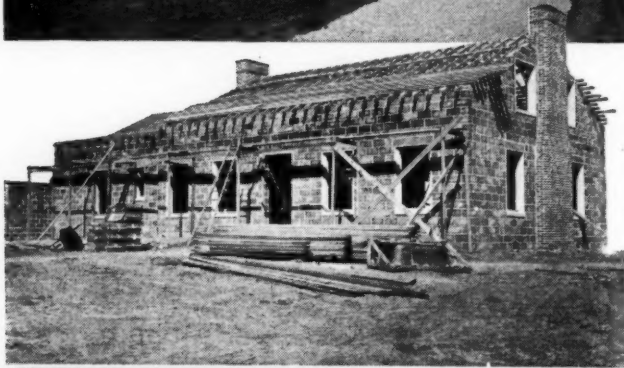
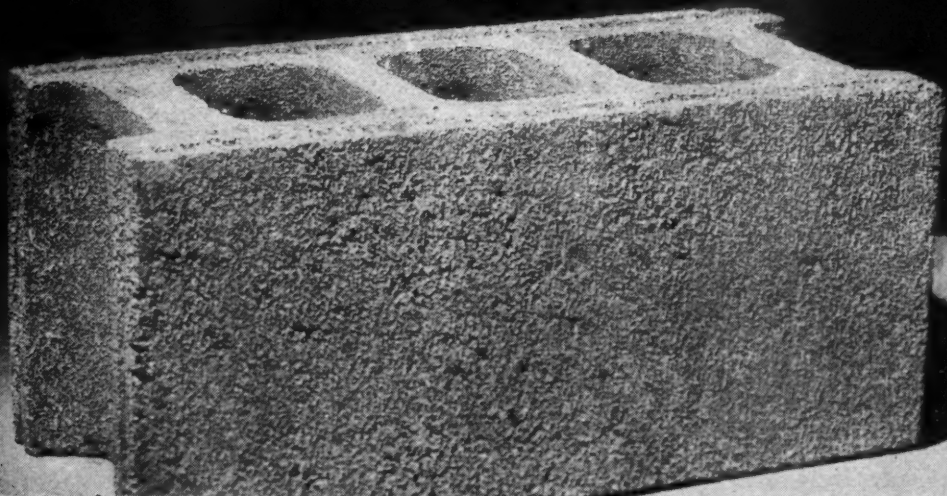
This is plainly the *tendency* of present government policies. Is it not also plainly their *purpose*? And what is going to be said and done about it by the great *middle class*, which—due to superior ability, efforts and thrift—owns the great bulk of the country's property because it has *saved and invested to increase its income*?

*Samuel O. Dunn,*

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS, AND DELBERT W. SMITH, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER; EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY.



## A KEY TO DEFENSE HOUSING



Top, attractive new home of Fred Lang, of Cunard-Lang Concrete Co., Columbus, Ohio, concrete blocks in foundation and cinder blocks, painted, above grade. Center, residence built with units produced by Cinder Block Co., St. Joseph, Mo., which also produced the concrete joists, lower photo. 'Incor' and Lone Star used throughout.

### HOMES BUILT TO LAST, NOT JUST TO LIVE IN "FOR THE DURATION"

CONCRETE units mean rapid erection, fire-safety and economy—attractive homes that last, not just housing to live in "for the duration."

For maximum quality and economy in concrete products, use 'Incor' 24-Hour Cement. With 'Incor', forms or pallets are filled twice daily, units are ready for delivery days sooner. Smoother-working 'Incor'\* mixes help produce clean finished surfaces. Yield is often increased, strengths are higher, breakage eliminated. Stock on hand is reduced, turnover speeded, profit increased.

Estimate these economies—you will find it pays well to use 'Incor'. Lone Star Cement Corporation, Room 2233, 342 Madison Avenue, New York.

\*Reg. U. S. Pat. Off.

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# AMERICAN BUILDER

## AND BUILDING AGE

### "Good Construction" Theme Hailed by Building Industry Men

**A**MERICAN BUILDER'S analysis of quality construction, showing that the better home proves less costly over a 20-year period, as developed in the April magazine, is being picked up and put to work in many communities. Here are some typical comments from building industry men from coast to coast.

#### FROM A PROMINENT DEALER

To the Editor: Bridgeport, Conn.  
Please send us 1,000 reprints of your article "Only The Rich Can Afford This Cheap House." Our purchase order for this is enclosed. Please send same to the attention of the writer. We think the April issue is an exceptionally good number.

Arthur Clifford, The A. W. Burritt Company,  
(Building material dealers at Bridgeport, Stamford,  
Danbury, Milford, Westbury).

#### FROM AN OPERATIVE BUILDER

To the Editor: Anderson, Ind.  
Please send me 200 reprints of the story in April issue of American Builder, pages 80 and 81, which illustrates quality building. H. A. Smith, Realtor and Subdivider  
(Grandview Terrace and Forest Hills)

#### FROM A LEADING MANUFACTURER

To the Editor: Pittsburgh, Pa.  
Will you please send us 100 reprints of the article appearing in your April issue, title of which is "It's Not the First Cost But the Upkeep." Please send your invoice along with this.  
M. M. Scott, Advertising Dept., Ruud Mfg. Co.  
(Makers of Ruud gas water heaters)

#### FROM A BUILDING FIRM

To the Editor: St. Louis, Mo.  
Will you please let me know the cost of reprints of your article in the April issue "Bargain Homes Are Costly to Own."  
Harry Rhodes  
(of Rhodes & Jones, Real Estate and Investments)

#### FROM AN OLD ESTABLISHED DEALER

To the Editor: Fargo, N. D.  
Please send us 100 reprints of "It's Not The First Cost But The Upkeep." Bill us and we will immediately send you a check.  
S. L. Chesley, Chesley Lumber & Coal Company.

#### FROM A CONSTRUCTION COMPANY

To the Editor: Santa Maria, Cal.  
Are mats suitable for newspaper advertising available for your pictographs, top of pages 80 and 81 April American Builder? If so, please give us the cost.  
H. R. Meyer, Doane Building Co.  
(General Contractors)

Such expressions indicate real interest; these men and the firms they represent are in earnest about fighting jerry building and destructive competition by acquainting the buying public with the facts of the economy of quality and the opportunities today, under long term financing, for permitting quality to pay for itself in day-to-day, month-to-month and year-to-year use.

Hidden quality in home construction and equipment which makes for long, trouble-free service must be emphasized to the home buying and house occupying public.

The slight extra cost to secure this quality must be explained. The importance of securing a low monthly cost for maintenance and occupancy should be stressed.

Where the home is being paid for in equal monthly installments (like rent), it is the average monthly cost that matters and not the purchase price. The original cost becomes, in reality, only an imaginary or theoretical figure, which is used simply for computing a part of the monthly expense. A thousand dollars added means \$6.33 more per month on the mortgage payoff; but, if that extra thousand dollars can put extra value and durability into the house and make it "easy to heat," it is certain that the owner's monthly expense for upkeep and fuel may be reduced more than \$6.33 per month as an offset—so he gets the benefit and comfort without any extra cost whatever.

We hear a lot of complaint from time to time about jerry building; but really the trouble is jerry buying. The public must be better educated to building values and how to secure them. The owner, who "shops around" for dozens of bids—counting on someone's making a mistake in his estimate—and finally lets his job to the lowest bidder regardless of reputation or competency, deserves all the grief that usually follows in the wake of such tactics.

When the price is skimmed the job is bound to be skimmed—and future expenses quickly wipe out the hoped-for gain. Jerry buying is just shrewd enough to let itself in for trouble and expense; while the jerry building it engenders stands as a lasting disgrace to the building industry, and often marks the financial collapse of those builders involved in it.

So again we urge our readers to build only the type of "quality home that a poor man can afford to own," and to preach this gospel forcefully to all home seekers.

#### If You Deal With the Lowest Bidder—

**W**HEN you buy for price, these days, you can never be sure. It's unwise to pay too much, but it's worse to pay too little. When you pay too much, you lose a little money—that is all. But—when you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do.

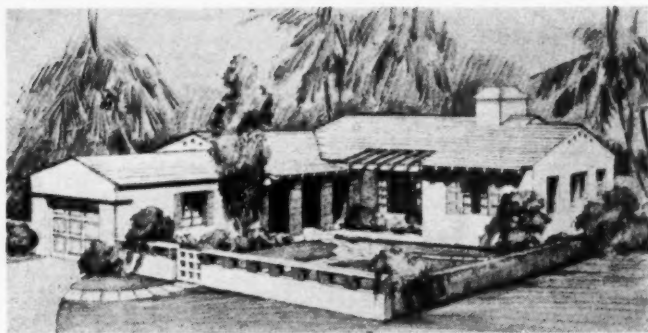
The common law of business prohibits paying a little and getting a lot—it can't be done.

If you deal with the lowest bidder, it is well to add something for the risk you run. And if you do that, you will have enough to pay for something better.

If the thing you buy gives good service, the price, regardless how much, is soon forgotten. However, the trouble on a cheaper item is seldom forgotten.

DON S. MONTGOMERY,  
Sec'y Wis. Retail Lumbermen's Ass'n. in  
"Our Little Newspaper."





PERSPECTIVE of front cover home by Architects Petersen and Wolz.

OUR front cover home is a striking white-roofed Florida home overlooking Biscayne Bay, designed by Architects Petersen and Wolz, of 605 Lincoln Road, Miami Beach. This firm has been doing a large volume of work for successful builders in Florida and has established a reputation for understanding the builder's problems and maintaining a high standard of architecture.

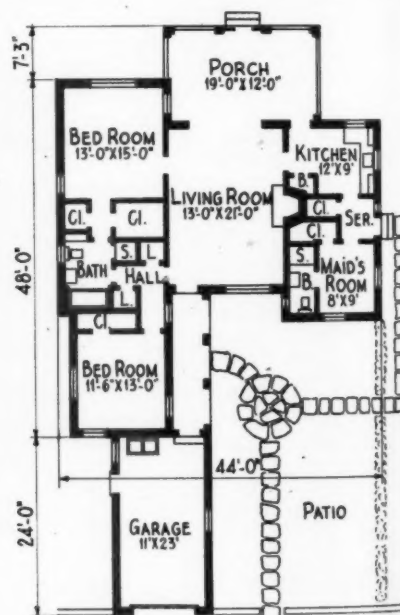
This little house, like many done by Petersen and Wolz, has a modern, livable, likable flavor and cannot be described in terms of any traditional style. It has a white

portland cement tile roof and cream-pink pastel colored stucco walls. The plan is laid out for a narrow lot facing north, and is intended for a small family. It is a thoroughly logical plan, with the garage close to the street and a covered "cloister" passageway connecting it to the living room. The patio, with its well designed high fence and gate, gives privacy.

The house revolves around the spacious 15' x 21' living room, which opens onto the 12' x 19' porch at rear overlooking Biscayne Bay. This porch is used for both living and dining, and a door leads direct to the kitchen.



VIEW OF LIVING ROOM towards street, showing beamed ceiling, decorative screen door.



LAYOUT for a long narrow lot facing north. This plan puts garage, cloister and patio toward the street and faces living room and porch toward the view. Door from kitchen to porch permits outside dining. TruCost figures will be found on page 142.

SPACIOUS TILED PORCH, at left, overlooks Biscayne Bay, and is used for both living and dining. Stained beams are attractive.



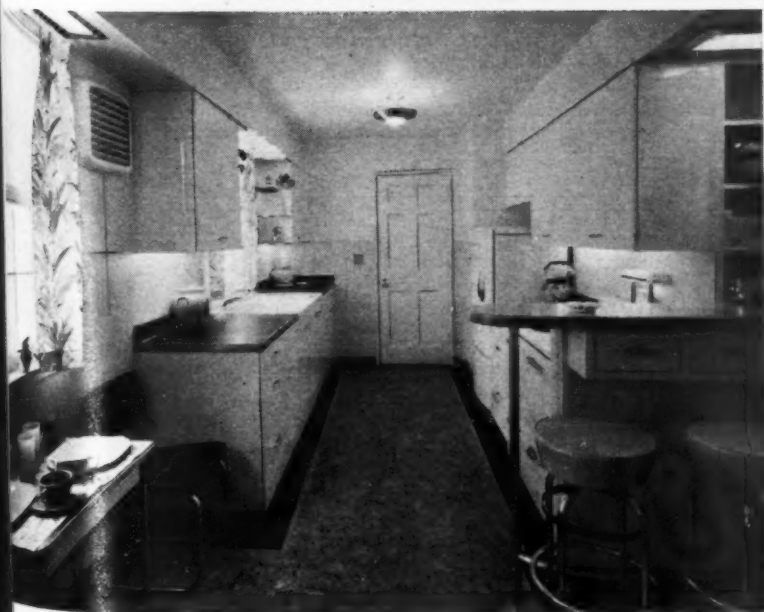
THE combination living-dining room of the G-E model home at Dearborn, Mich., Detroit suburb, shown at right.



A FEATURE of the master bedroom is the recess for twin beds having fluorescent lighting built in soffit.



BELOW: The kitchen of this model home has been planned to combine features most desired by average home owner.



## Detroit Model Home Eliminates Owner's Four "Pet Peeves"

**W**HAT are the four most common complaints of home owners regarding the structures in which they live? The answer, of course, is of interest to builders, and as the result of a utility survey, General Electric Company recently opened a model home planned to rule out these "demons" that upset domestic tranquility—inadequate closet space, insufficient electrical outlets, uneven heating, unsatisfactory kitchen arrangement. Its features are detailed and described on the following pages.



G-E MODEL HOME planned to rule out "pet peeves" and built at the Ford Foundation, Springwells Park Development, Dearborn, Mich.

## 6-Room Model Home Attracts Thousands

**E**LIMINATION of the four "pet peeves" of home owners has been tackled by the General Electric Home Bureau in a model six-room Colonial home which opened February 9 for display in the Springwells Park Development, Dearborn, Mich., and attracted 43,300 enthusiastic visitors in the first five days that it was open for public inspection.

C. W. Stuart, manager of the G-E home bureau in Bridgeport, Conn., said the house, designed to sell in that area for about \$10,000 with lot, provided an answer to four common complaints listed in the following order as a result of a utility survey:

1. Inadequate closet space; 2. insufficient electrical outlets; 3. uneven heating; 4. unsatisfactory kitchen arrangement.

The architects, Victor Civkin, with Ditchy, Perry, Sidnam, of Detroit, as associates, have designed and equipped this model home with these "pet peeves" in mind. At the same time the floor plan provides unusually large rooms and extraordinary flexibility in adapting the rooms to varying needs of livability, convenience and economy of operation.

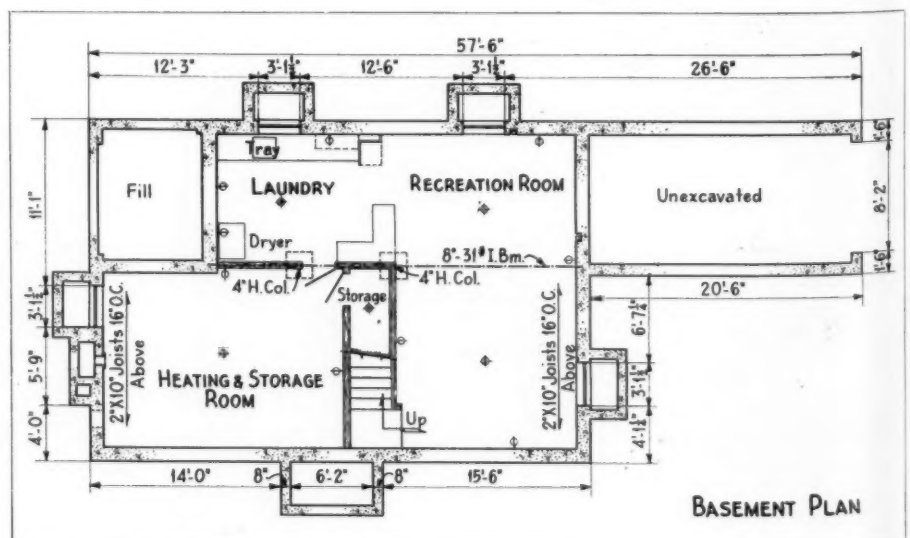
The one and a half story house

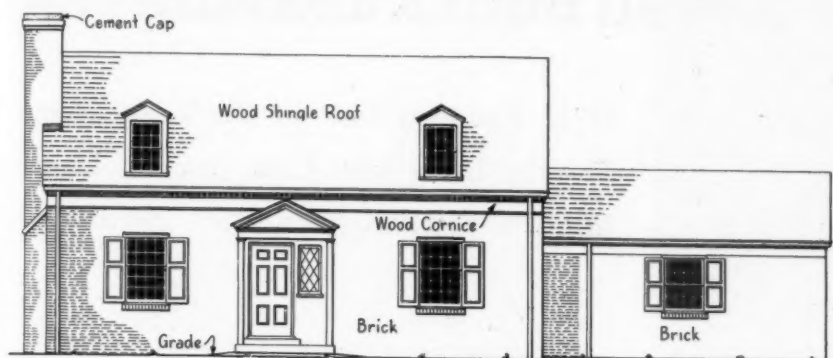
has a one-car attached garage, porch, a recreation room in a full cellar, and two baths. The brick walls are painted white. The roof is wood shingle, with two dormers in front and one in the rear.

The first floor includes living room, dining room, kitchen and breakfast room, and a chamber which could be used for study, guest room, or maid's room, adjacent to a full bath with shower stall. The arrangement of living room and dining room in an L-shape provides a feeling of spaciousness. The distance from the front of the living room to the rear dining room wall is 23 feet five inches, while the living room is 18 feet wide. It has a fireplace with built-in bookcases at either side.

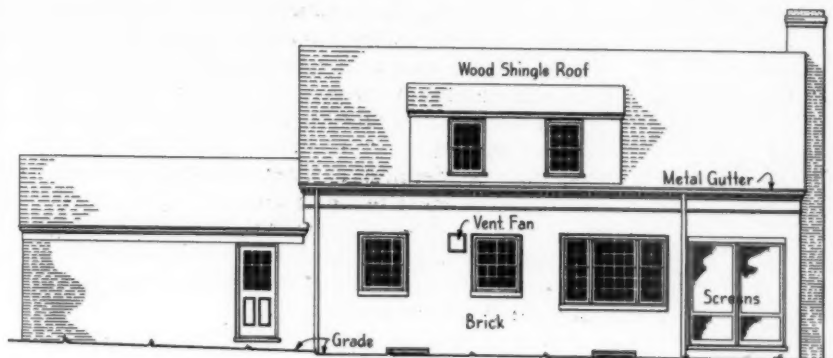
The second floor has two unusually large bedrooms (Continued to page 140)

**RIGHT:** Basement plan of Detroit model home is well arranged, with recreation room, laundry alcove, and heating and storage space. Other floor plans and elevations are shown on opposite page.

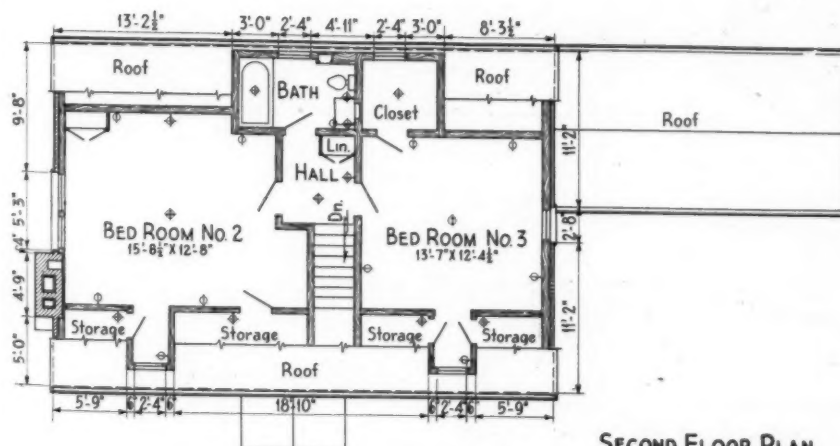




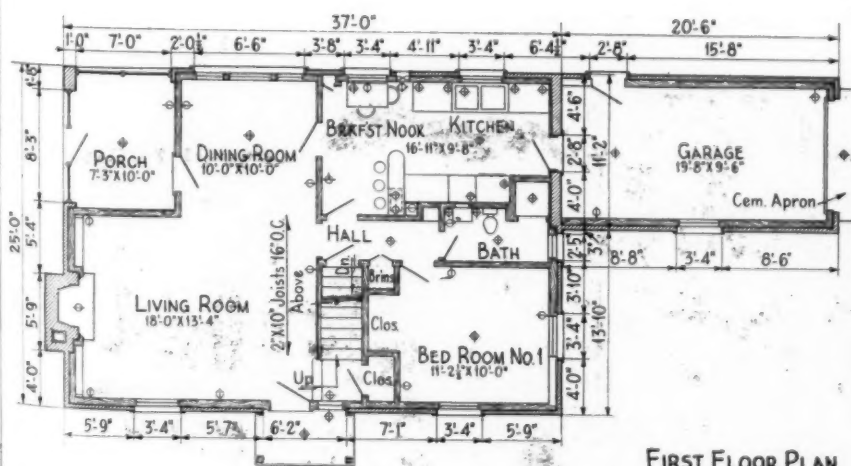
FRONT ELEVATION



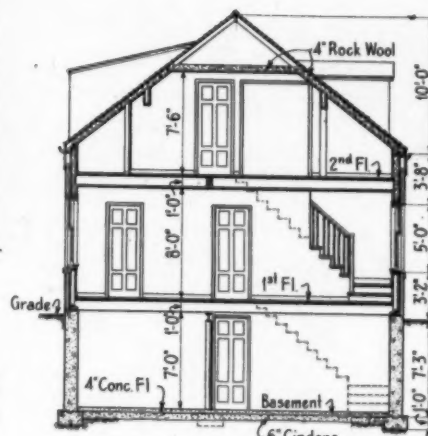
REAR ELEVATION



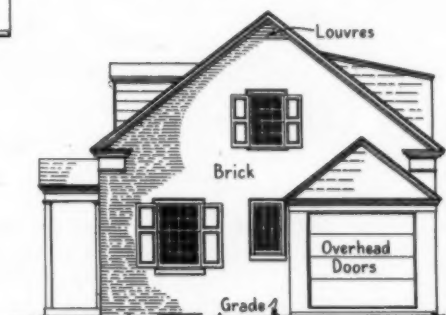
SECOND FLOOR PLAN



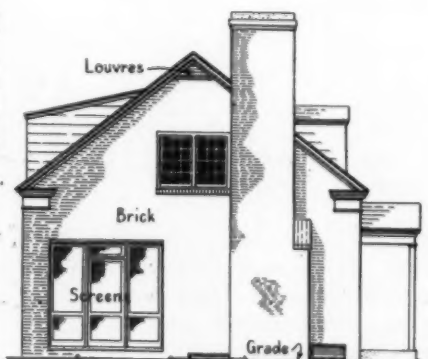
FIRST FLOOR PLAN



CROSS SECTION



RIGHT SIDE ELEVATION



LEFT SIDE ELEVATION

AS indicated here, an exceptionally fine job of detailing of this G-E Detroit home was done by architects, Victor Civkin, with Ditchy, Perry, Sidnam of Detroit as associates. The living-dining room combination and the unusual kitchen are pictured on pages 61 and 141, with two views of each one of these rooms. Cubage: 23,150 (garage 2,400 additional). TruCost figures will be found on page 142.



# Well Built Knoxville Homes

H. C. Fonde & Son, in the Tennessee TVA Region, Offer Low Cost, Thoroughly Insulated, Electrically and Oil Heated Units

*Now*  
**ELECTRIC HEAT**  
is  
**MORE ECONOMICAL**  
Than Any Other Heat  
in LOW COST HOMES



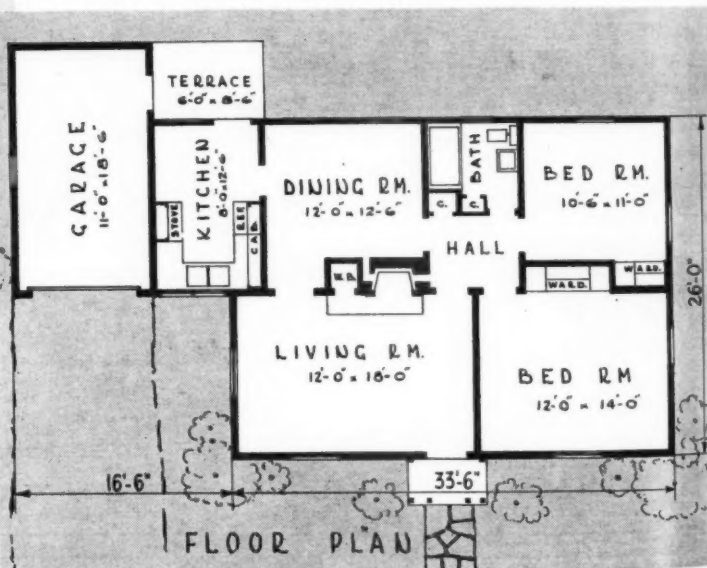
Save as much as...  
\$45.00 per year

ABOVE: Brochure explains the basis of calculation and records of heating costs in Builder Fonde's new subdivision, Highland Hills, near Knoxville. The arithmetic on which the electric heating claim is based appears in the table found on page 67.

**A** "SMOKELESS COMMUNITY" is under construction on the edge of Knoxville, Tenn., a city near the soft coal fields of Tennessee, Kentucky and Virginia, which itself often has unwanted blackouts. It is the first private project of its kind, so far as known, and is the latest undertaking of H. C. Fonde & Son, whose low-cost quality homes have attracted national interest since a description in *American Builder* of their previous developments.

The homes are being built on a gently sloping hillside, with a view of the Great Smoky Mountains National Park area and the Tennessee River, which is becoming a 650-mile chain of lakes behind a series of TVA dams. A road has been constructed, circling the new development—Highland Hills—and at homes under construction or just completed are signs with this lettering: "An Electrically Heated Home by Fonde."

Stuart Fonde isn't venturing into an experiment with this "first community restricted against smoke." He has



RIGHT: An enlarged view of the house shown on brochure above, and floor plan indicating how with electric heat it is not necessary to provide space for a utility room—one of savings in construction cost.



# Heat Economically

built more than \$300,000 worth of other low-cost quality homes during the last several years, and a large number of them also have automatic heat. He has installed oil and electric heat with the guesswork left out.

His other developments—Forest Court, Century Court, Hedgewood, and scattered homes in Knoxville—are mostly automatic heat users. During recent months he has gone in for electrically heated homes more. His promotion of Highland Hills in the spring of 1941 pointed out that electrically heated homes were available at low cost. He added:

"Here is your opportunity to buy a beautiful, thoroughly modern FHA approved home in a SMOKELESS COMMUNITY. These homes are complete in every detail. You will save yourself time, worry and money when you buy a ready built home now. You can see exactly what you are getting and start saving today. These five- and six-room homes have quality and conveniences that just last year were unheard of in low cost homes. These conveniences together with modern equipment make housework a pleasure. The saving in help and cleaning will go a long way toward helping buy it, and give you time for rest and pleasure.

"We have installed oil and electric heat, with the guesswork left out. Fonde-built homes cost you less to buy and own than a home of similar size and quality that is heated otherwise.

"A low cost home without electric heat is out of date before it is built. Buy a home that's five years ahead . . . one that gives you most for your money and is worth the most in years to come. . . If you are unable to visit these homes today call H. C. Fonde and Son for detailed information."

Prices of electrically heated homes begin at \$4,450, complete with lot. Monthly FHA payments are \$32.

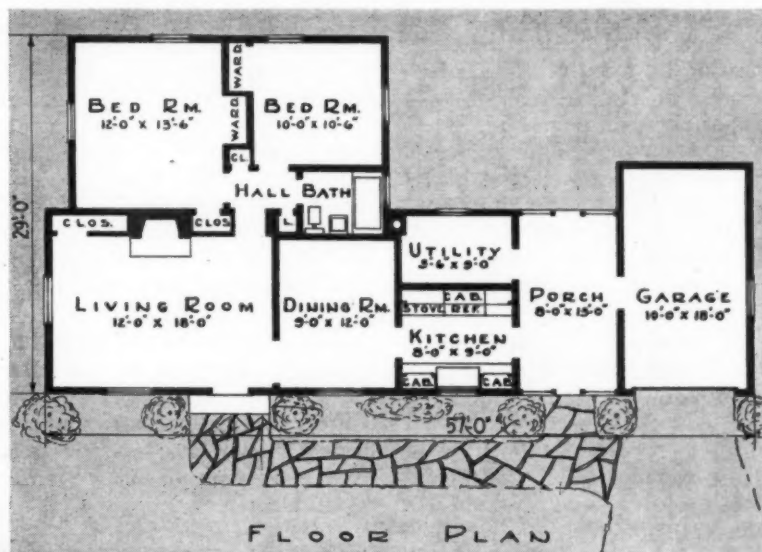
Taking into consideration the draft, Mr. Fonde even made this offer to men of draft age:

"If you are drafted in three years we will take any house in Highland Hills back and reimburse you to where your stay in the house has been a fair rental. A gamble in which you can't lose. Select your home while prices are down."

Tying in with the Highland Hills development, the City Power Board for the first time early in 1941 placed in a centrally located display window an exhibit of pictures of Fonde-



THIS sectional model of Fonde construction is displayed in the window of the City Power Board. It shows electric heater, thorough insulation, quality building in this "first smokeless community."



THE plan above for the house at the left shows arrangement for Fonde houses equipped with oil-fired conditioning.

THIS house is Fonde-built in Hedgewood subdivision of Knoxville. A sign stated, "This entire home cost only \$1.32 a day."







**KITCHENS** are a Fonde specialty; this is one in the house shown in plan and exterior view on the preceding page. Note clever table.



**THE** above kitchen, with glass block panel wall with inset window, is part of the first all-electric home built by Fonde.

built electrical homes, the costs of each and the cost for heating by months. The background consists of a cross-section of a home to show construction (illustrated at the upper right on page 65).

Ribbons from lettered cards in the window led to a Wesix automatic electric heater and such materials used in construction as: white walnut trim, Bruce streamlined flooring, moisture barrier, metal angle reinforcing, waterproofed insulation, waterproof paper, Capitol rock wool insulation, Gold Bond plaster board to reduce cracking 75 per cent and aid insulation. Products listed as making possible electric heat for the beauty and permanency of the Fonde-built homes include: Capitol rock wool, by Standard Lime & Stone Co.; weatherstripping, by N. S. W. Co.; electric heaters by Wesix Electric Heater Co.; asbestos roof and siding, by Keasbey-Mattison Co.; asphalt roofing, by Logan-Long Co.; Gold Bond plaster board, by National Gypsum Co.; paints and paper, Sherwin-Williams Co.

Emphasis is put on insulation. Mr. Fonde finds that electric heat is economical only in a home especially built for it.

"The average home in use today has a heat loss of approximately 650 BTU's per square foot of floor area at zero degrees outside and 70 degrees inside," he says. "The same size home can be built today with insulated floors, walls and ceilings, and with weatherstripped doors and windows, having a heat loss of approximately 220 BTU's per hour per square foot of floor area. This is a saving of approximately two-thirds of the heat loss. . . .

"Too much stress cannot be laid on insulation. Every home buyer pays for insulation whether he has it or not and the one without it pays much the greater price. The word insulation applied to a home alone will not suffice; it is the degree to which a house is insulated that counts. A small amount of insulation will do little or no good; the

proper amount of insulation poorly applied will give unsatisfactory results. It is therefore of paramount importance to use the maximum amount of the proper insulation and install it properly to get the best results.

"Weatherstripping of doors and windows is likewise necessary and should be well done. A complete weatherstripping and insulation job will cost only about four per cent of the cost of the small home and will amortize itself in about ten years in fuel costs and give added winter and summer comfort to the occupants."

Mr. Fonde considers that electrical heating would be inadvisable for many homes, especially old ones of poor construction and lacking insulation. On this he says:

"Old homes may be electrified but careful study and engineering should be applied. A complete weatherstripping and insulation job would have to be done. Where rooms are large, ceilings high, and where there are large glass areas, electrical heating would be expensive. Many



**STUART FONDE** in the kitchen of one of his all-electric homes.



## COMPARISON

Plan "A" costs \$4,000 to build

Monthly FHA payments.....	\$32.00
Depreciation on electric heaters is negligible estimated per month.....	.20
Service negligible.....	.15
Cost of electricity for heat per season (mo. cost).....	3.75
Total monthly cost.....	\$35.90

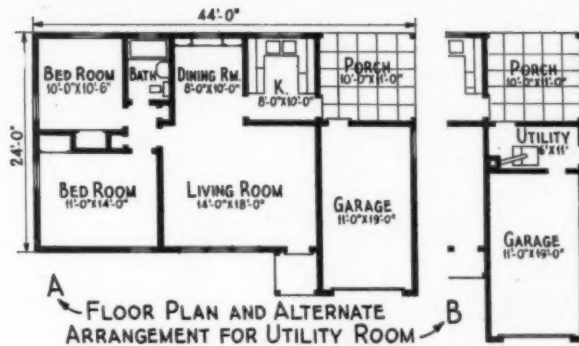
Plan "B" costs \$4,300 to build

Monthly FHA payments.....	\$34.40
Depreciation of stoker and furnace over 15 yr. period; monthly average.....	2.00
Average monthly service based on \$6.00 per year.....	.50
Cost of coal \$33 per year; monthly average.....	2.75
Total monthly cost.....	\$39.65

An actual saving of approximately \$3.75 per month in favor of the electrically heated home, or \$45.00 per year. Plus many other savings and advantages on which you can place your own value:

## ADVANTAGES OF ELECTRIC HEAT

1. It is clean—less laundry—less paper cleaning—less painting—less house cleaning—no smoke.
2. It is safe—No hot ashes—no sparks from the flue.
3. It is dependable—Entirely automatic—does not need your attention—you can leave your home for a month with no one to attend it and yet not have frozen plumbing.
4. It is healthful—Keeps an even temperature of moist, healthful air—humidity can be accurately controlled.
5. It is economical—In a Fonde-Built Home the cost of electricity for heat is unbelievably low. Actually less than the cost of coal in many ordinarily built houses of the same size. It is the one heat you buy after you use it and buy only in the quantities you need.



ABOVE at left: Fonde's cost comparison of two similar homes, one heated electrically, the other with coal. This is based on floor plan A at the right, with B showing provision necessary for utility room. Above house is further variation of same plan with garage turned.

of the more recently built smaller homes could be converted to electrical heat. The cost to heat a well-insulated and weatherstripped home with normal amount of windows and 8' ceiling height should run about 6c per square foot floor area per season.

"Many prospective home owners stress size of the home above the quality. The cost of electrical heat is directly proportional to the size, and will be entirely out of the question with poor construction and in the absence of insulation."

It is Mr. Fonde's opinion that the proper construction and insulation of a home is just as important as the use of

a good heating unit. Also that builders should give more attention to sturdy construction, with special attention to the small leaks about the house that cause the owners so much expense later.

He emphasizes that "it is false economy to omit insulation and weatherstripping in any home." All Fonde homes are built with full insulation. That is why it is possible for promotion of the new Highland Hills "smokeless community" development to offer proof of how savings are possible with electric heat.

For instance, two homes are pictured inside the brochure distributed during a Fonde-home exhibit in the City

Power Board window (illustrated on first page of this article). The homes are identical in living space. Plan "B" shown here has an added utility room and flue which are considered essential for housing the heating plant and coal. These comparisons are given in the accompanying table above.

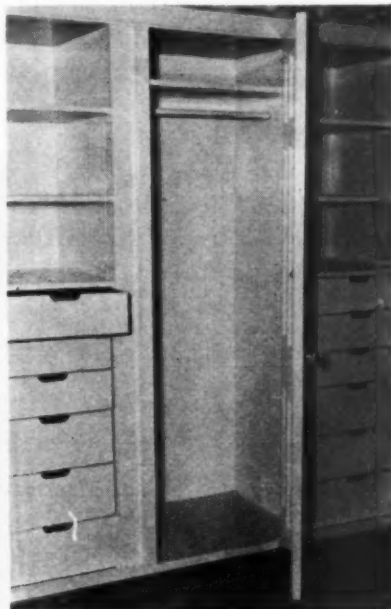
For a Fonde all-electric home, with base price of a 6-room electrically heated home and lot being \$5,000, it was shown that such features could be included as a built-in electric washing machine, electric dishwasher and garbage disposal unit, and electric stove, all for a total monthly cost of \$41.20. That would include the monthly payments on home and lot of \$35.90.

Mr. Fonde told Knoxvilleans that he had bought \$25,000 worth of building materials before the rise in prices and assured them that "as long as this lasts, our prices will not go up."

He also pointed to the advantage in construction of a complete building service and

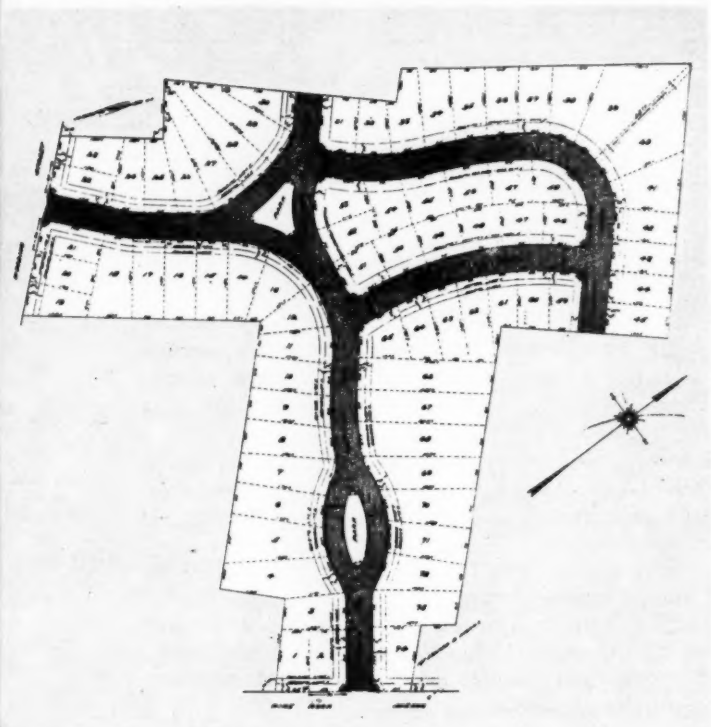
(Continued to page 139)

BELOW: Fluorescent lighting is used above the medicine chest in the home pictured on page 65. Built-in wardrobe illustrated at left is a typical detail of quality-built Fonde homes.





TWO of the 72 homes at Wilmot built on standard 24' x 30' foundation.



WINDING ROADS and parkways are featured in the Wilmot plan, avoiding monotony. Lots are large.

## How New Haven Builders Meet Home Shortage

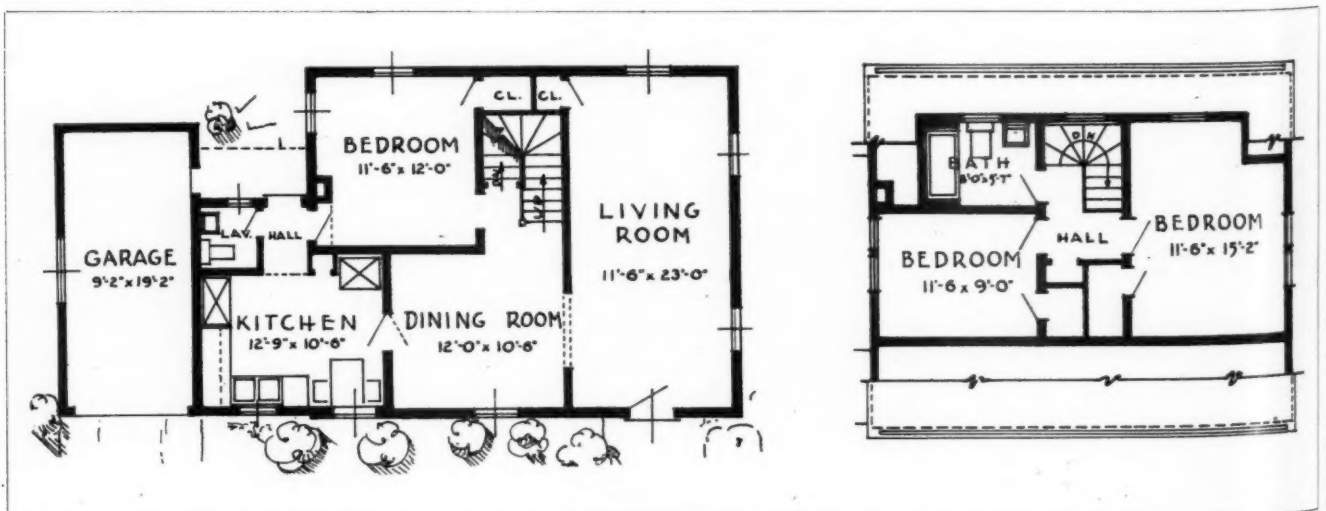
**C**O-OPERATION is the answer.

Co-operation in which the contractor, lumber dealer, realtor and architect unite their efforts to help the private building industry meet the need for good homes at a price within the reach of the average worker.

In New Haven, Conn., the tremendous expansion of industry has created a housing shortage, as it has in many nearby New England cities. The local private building industry's answer to this challenge, as shown in this article, may point the way to the solution in other towns.

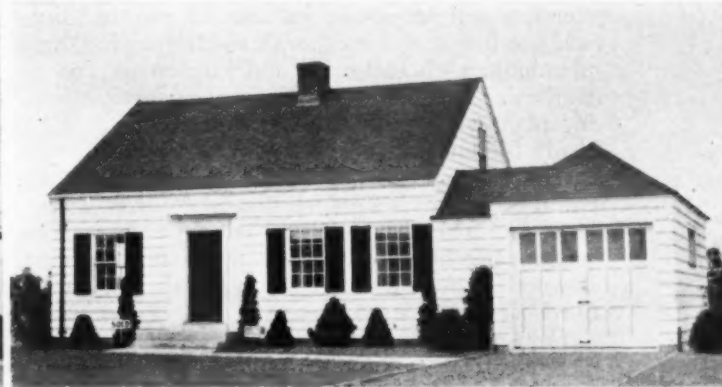
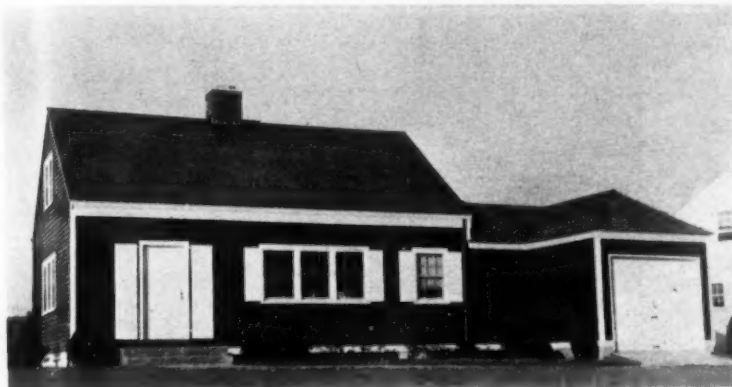
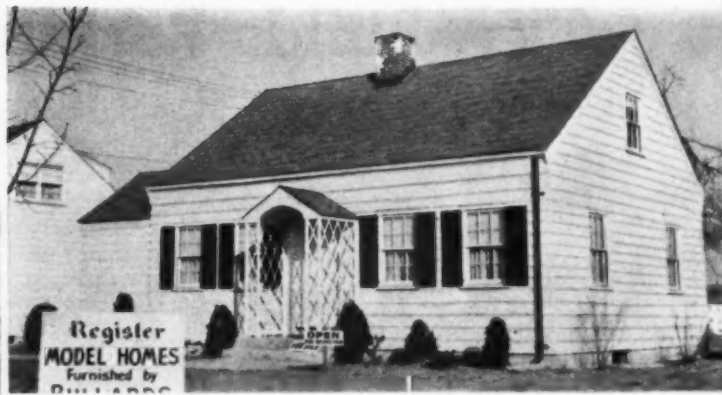
How the challenge is met is best illustrated in the story of Wilmot subdivision in Hamden.

The idea was originally conceived by the DeForest & Hotchkiss Lumber Company, well known dealers with several yards in this area, who called in The William T. Beazley Company, realtors, as sales consultants. After preliminary studies Thomas A. Laydon, a builder with a long, successful experience in the residential field, was brought in. Then the final member of the "Big Four"



ONE of three basic plans used at Wilmot, where all foundations are 24' x 30' and all roofs the same pitch.





FOUR exterior variations of basic Wilmot plan. Additional variations shown on pages 136 and 137.

home building joined up to do his important part—Thure E. Olson, architect.

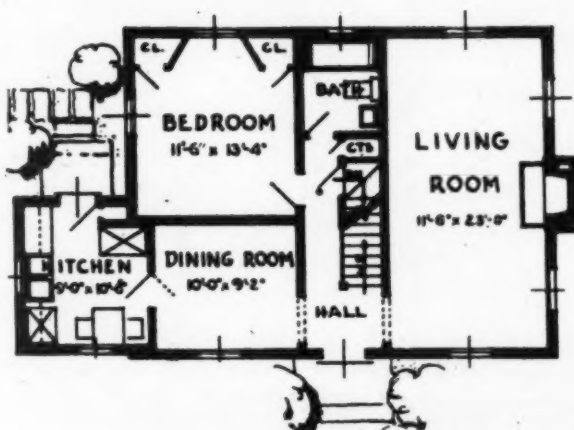
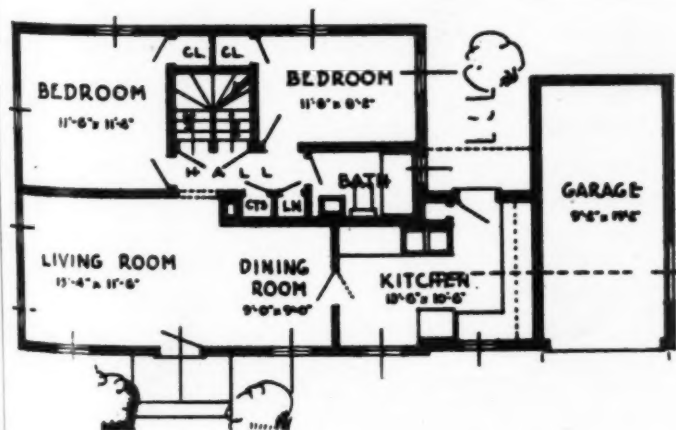
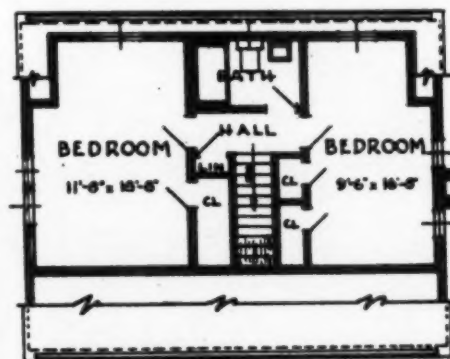
The first house in the 72-home subdivision was started last April, and in just eleven months the entire project was sold out.

It may be argued that the special conditions in New Haven territory accounted for this success, but the facts are that like any good operation, this one succeeded because of the skillful conduct of the job all the way through.

In the first place, the market was carefully gauged and a price established which would fix the total monthly payments at only \$36.36. See table, page 136. This figure enabled the firm to tell the public that it was "cheaper to buy a home than pay rent."

Next in importance was the attractive and artistic layout of

(Continued to page 136)



STILL MAINTAINING the 24' x 30' foundation, Wilmot builders get variety with these different basic plans.

# TVA Builds Portable Houses

## 3-Section Cottages Are Shop-Fabricated and Trucked to Site

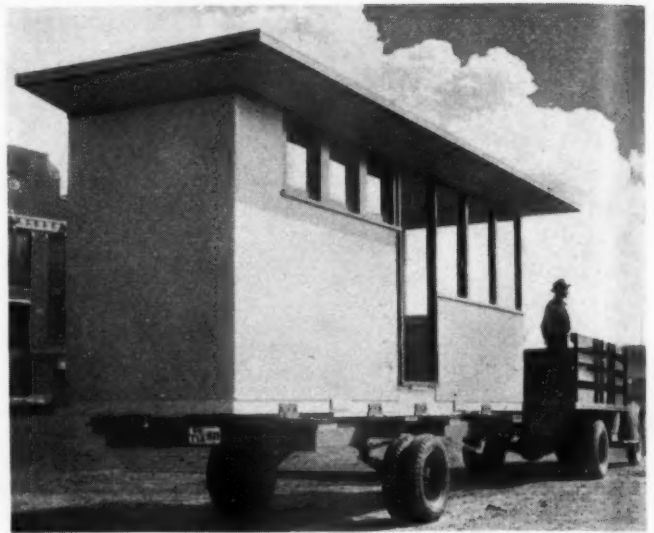
**T**HE Tennessee Valley Authority has developed a factory-built portable cottage, six of which have been produced at Muscle Shoals, Alabama, for use at Pickwick Dam. This portable cottage was developed as a result of continuous studies conducted by TVA almost since its inception to work out the most economical means of housing workers temporarily employed at its construction camps.

The new cottages are built in sections, each of which contains one complete portion of the building—floor, walls, ceilings, and roof, with electric wiring, light bulbs, plumbing, with bathroom and kitchen fixtures in place, windows, screens, doors, kitchen cabinets, electric cooking plate, and refrigerator already installed and painted, ready for immediate use.

The smaller cottages are in three sections, the larger cottages in four. Each section is  $7\frac{1}{2}$  feet wide, 22 feet long, and  $9\frac{1}{2}$  feet high, and weighs about 3 tons. The sections are fitted together with bolts. The construction is wood frame with exterior of weather-proof insulating fibreboard (Homasote).

Four workmen can assemble the sections into a completed cottage within 4 hours. The only parts of the cottages constructed on the ground were the supporting cinder-block piers. Dismantling can be carried out in as short a time as the assembling, and a cottage can be transported to another site with no loss except the slight cost of the piers.

The single-cottage model consists of a combination living and bed room, a kitchen, bath, a small bunk room,



ONE of the  $7\frac{1}{2} \times 22$  ft. sections being hauled away from the erecting shop on trailer 60 miles over rough dirt road to the assembly site.

and a screened porch. For vacation use it will accommodate four to five persons. The larger cottage is a duplex, and on each side of the central partition is one large room, a kitchen, and a bath. The cottages are styled in the modern manner, with flat, wide, overhanging roofs; and either of two exterior color combinations are used, buff with tan or gray with green.



SECTION, lowered off truck onto prepared foundation, rides easily along prepared rail—1" pipe and small pulley wheels. Section is fully equipped and wired and has plumbing and heating installed.



The six portable cottages produced by TVA—four of which are duplex—were turned out in the Authority's machine shop at the Shoals, by production-line methods common to industrial mass production. All equipment used is standard to the average woodworking shop.

In the Shoals machine shop two duplex cottages can be manufactured simultaneously, a total of eight sections. Every section is mounted on small wheels, which in turn are mounted on tracks, so that the section can be rolled from one point to the next in the production process. Twelve to sixteen hours' working time is required to complete a section. The cost, including transportation and field assembly, promises to compare favorably with the cost of ordinary construction, the Authority's engineers maintain. The cabins were produced by building trades craftsmen working at prevailing wage rates.

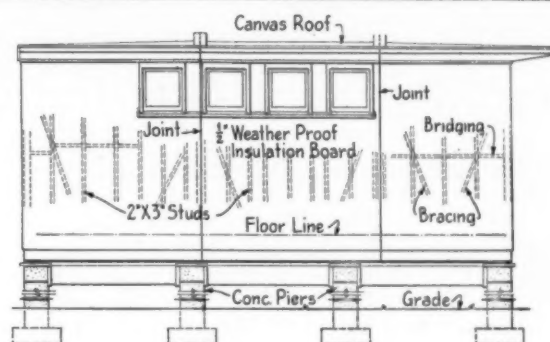
The portable cottages so far erected in Pickwick Park have been transported the approximately 60 miles from Muscle Shoals, some of the distance over rough country roads, in a standard truck trailer, one section at a time, in from 2 to 3 hours, with no evidence of racking. No special permit is needed for hauling the sections, since they come within the usual legal dimensions and weight.

It is thought that the methods used in building the portable cottages might have especial value in connection with defense or emergency housing. Large groups of low-cost houses built in this fashion could be quickly and easily removed from a location after the need for them had been satisfied, and made available elsewhere.

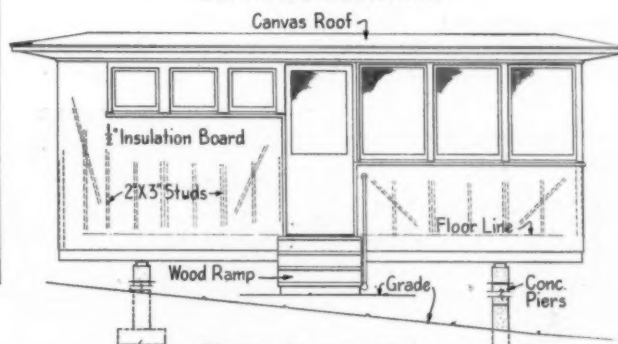
Development of the portable cottage was originated by Louis Grandgent when he was connected with TVA as Chief of the Architectural Section. It was completed by the Authority under the supervision of Carroll A. Towne, with the assistance of the architectural staff, George Richardson, Harry Gurnee, Woodruff Purnell, and Roland A. Work, consulting architect; and of the construction staff under W. B. Richardson. Mr. Grandgent, now on the architectural staff of the United States Housing Authority, at Washington, has been retained in a consulting capacity by TVA for the portable-cottage development. Work is under way on 150 defense houses of this type, same size sections, for Muscle Shoals area.



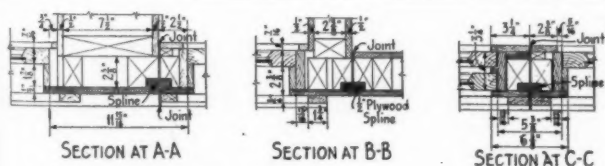
FINISHED TVA 3-unit cottage; below, plan, elevations and details.



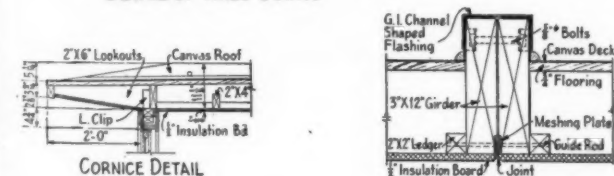
LEFT SIDE ELEVATION



FRONT ELEVATION

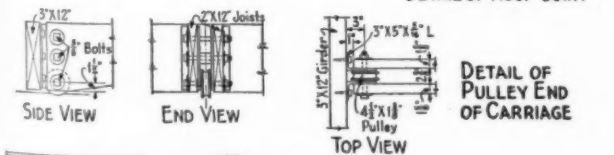


DETAIL OF WALL JOINTS



CORNICE DETAIL

DETAIL OF ROOF JOINT

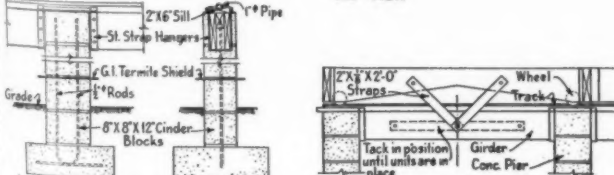


SIDE VIEW

END VIEW

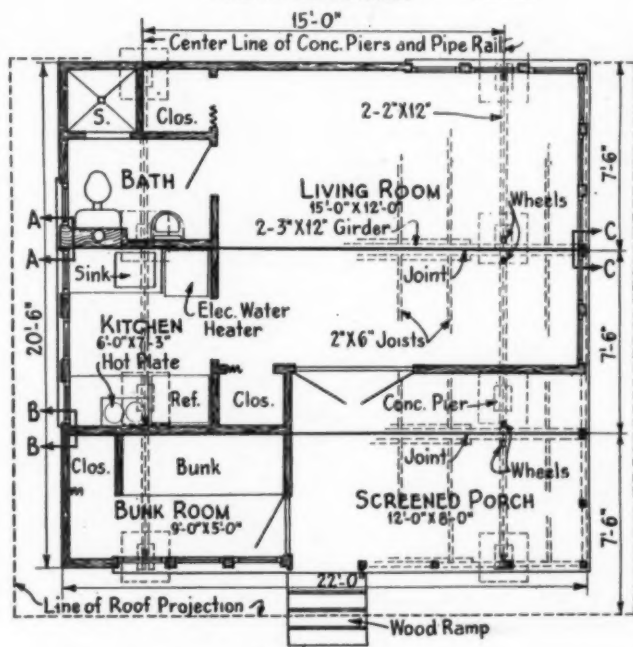
TOP VIEW

DETAIL OF PULLEY END OF CARRIAGE



DETAIL OF CONCRETE PIERS

DETAIL OF CARRIAGE AND BRACING



FLOOR PLAN



## Smart Styling in Gas Station

### Tacoma Auto Service Sets Record

**A** NEW and thoroughly delightful use for knotty pine paneling has been found in the construction of a super deluxe service station in Tacoma, Washington. The station, built by the Maxwell Petroleum Corporation, embodies many new and novel features originated by its president, H. D. Maxwell. Among these unusual features is a waiting lounge beautifully furnished in a manner suggestive of the sitting room in a home and designed especially for the convenience of women. There are few, if any, so elegantly appointed as this one.

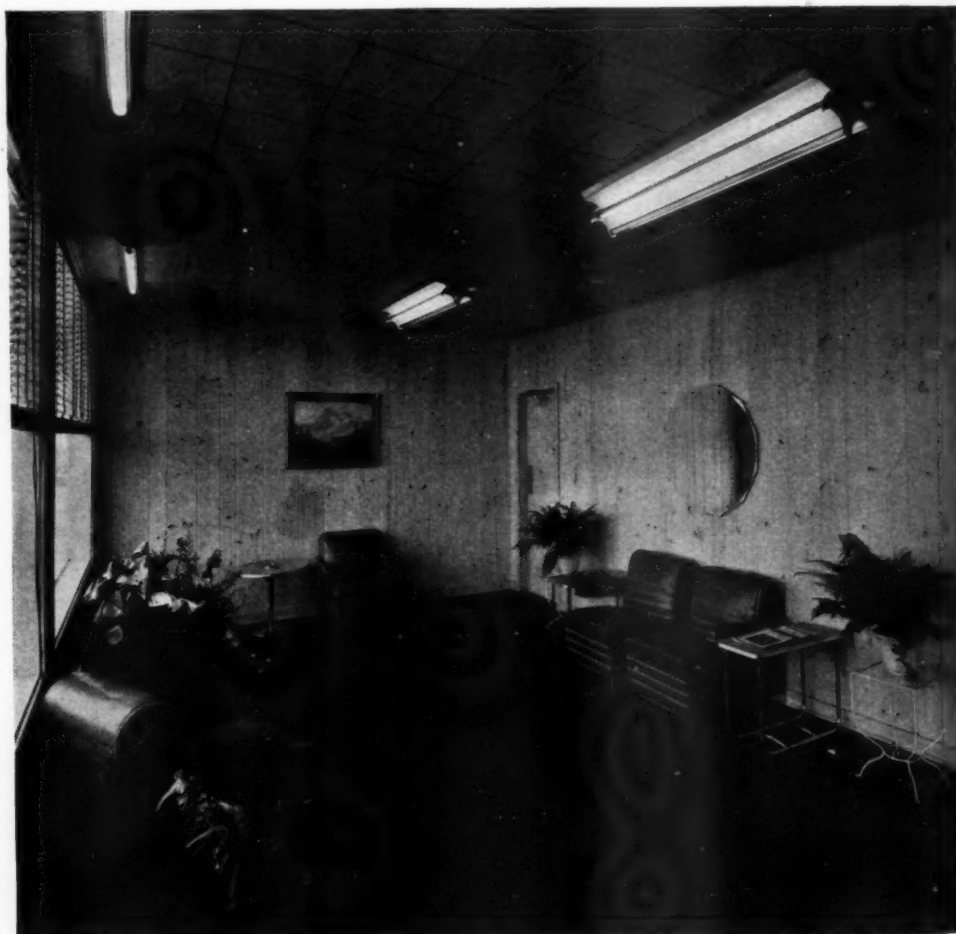
The lounge room is 12½ feet by 20 feet. Random widths of knotty Idaho White Pine were used for the wall paneling. The doors and frames are also in knotty pine. The woodwork is painted to give a blond finish. One coat of interior flat white paint was applied and wiped off. This was followed by two coats of Schorn's Nudene, a transparent finish. A coat of paste wax was applied and rubbed

down, giving the paneled walls a beautiful, faintly white finish.

The ceiling is in a pastel blue color Celotex and the floor is covered with asphalt tile in a black and white design. An oil painting of Mount Rainier done especially by Lionel Salmon, noted Pacific Northwest artist, a large mirror and leather and chrome furniture complete this unusual waiting lounge.

The transportation and general offices of the Maxwell Petroleum Corporation, located in the same building as the lounge, are also paneled in knotty Idaho White Pine.

It is interesting to note that this service station in Tacoma holds the record for pumping more gasoline than any other service station on the Pacific Coast.



**LOUNGE** in Maxwell Service Station, Tacoma, beautifully paneled in knotty Idaho white pine.





Photo by C. E. Goodridge

SALES, service, display and parking are featured in this striking modern building designed by August Geiger and built by the M. R. Harrison Construction Corp.

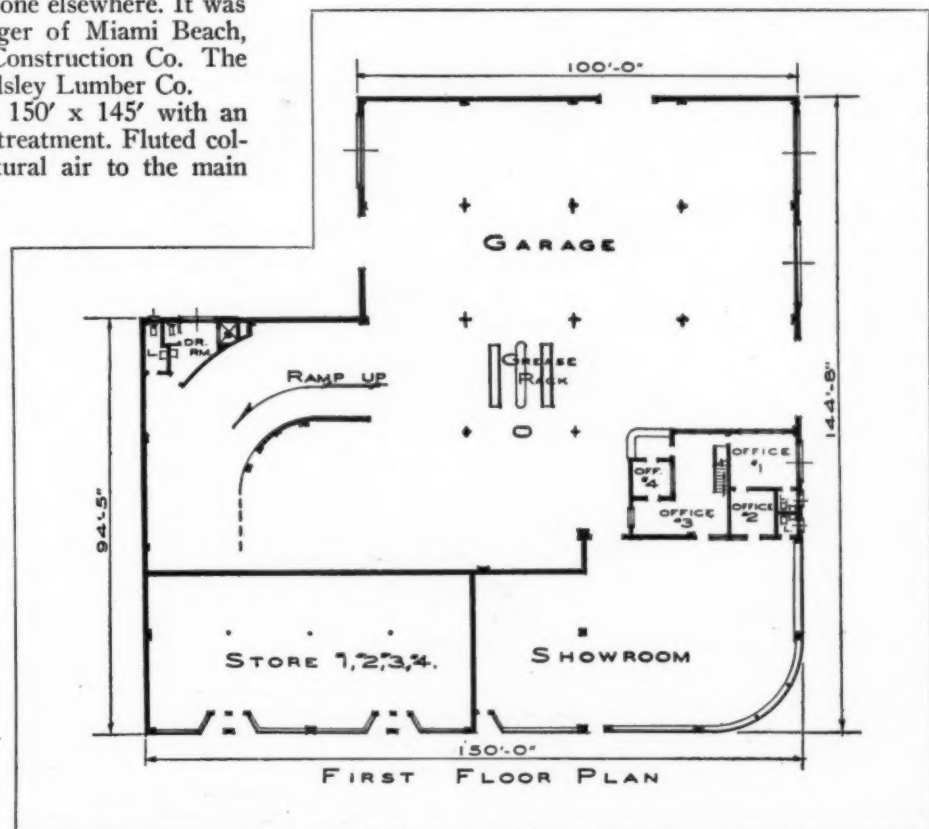
## Modern Miami Garage and Auto Display

IT IS not often that a public garage is good looking enough to attract attention—which makes the building illustrated above doubly interesting, for it provides garage and auto display as well as a very large parking area. The building is another feather in the cap of Miami, Fla., where the architects and builders seem to be able to do things that aren't being done elsewhere. It was designed by Architect August Geiger of Miami Beach, and built by the M. R. Harrison Construction Co. The materials were supplied by the Lindsley Lumber Co.

This structure is approximately 150' x 145' with an unusually attractive curved corner treatment. Fluted columns give an impressive architectural air to the main portion.

In accordance with good modern practice, the showrooms, display areas and stores across the front have been kept flexible in arrangement so that the varying needs of different renters can be accommodated. The showroom is backed by several small offices, toilets and work space. The balance of the large area at the rear is devoted to automobile service, with grease racks and gasoline pump equipment. The ramp leading to the roof is 22' wide, curving up at an easy pitch. The huge unobstructed roof area is finished with a substantial concrete floor and equipped with wood bumpers all around the walls to prevent damage to the parapets. A rather heavy concrete beam construction was required to maintain the considerable load of this large roof parking area.

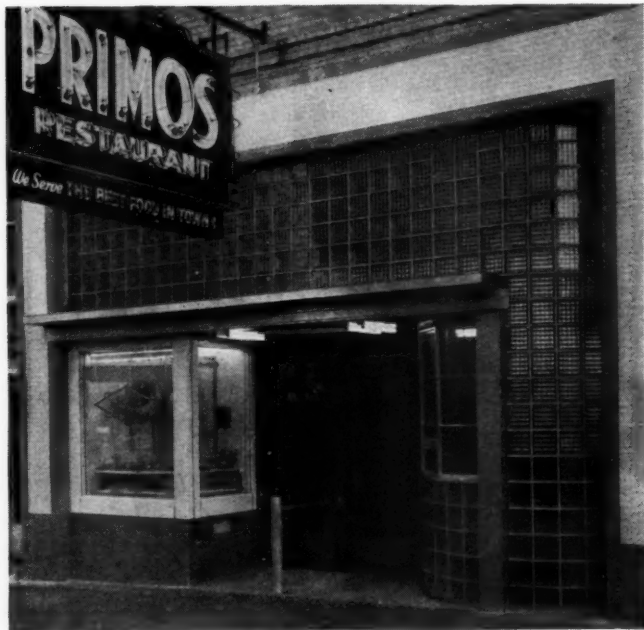
Roof parking featured in  
150x145 foot structure



FLOOR AREA is approximately 150' x 145' with a wide ramp at rear leading to roof, the entire area of which is used for parking. Showrooms, stores and service areas are well laid out.

# Color, Light and Modern Equipment Attract Re

Everything from "Electric Eye" Door Openers to Air Conditioning Featured in This Jackson, Miss., Up-to-Date Cafe



**S**EVERAL constructional features are included in the new Primos Restaurant recently opened in Jackson, Miss. One of these is the use of fibre boards for sound deadening, insulating and wall decoration. Another is the interesting two-level arrangement of the booths, presenting an air of coziness and privacy without crowding. The restaurant is also equipped with "electric eye" doors.

The exterior of the restaurant is of blue Vitrolite with a rounded portion in glass block. Going inside through the automatically swinging doors, the guest is struck by the ornamental nature of the fluorescent lighting, the step-up arrangement of the booths, the tile floor in pale blue and cream and the interesting wall paintings.

The larger booths are reached by mounting two steps to the left just past the cashier's stands. The booths are upholstered in two-tone brown leatherette. The table tops as well as the top of the counter service at the right are of Formica.

The ceiling and walls of the ground floor are of wood fibre blocks (Insulite), the side wall blocks being laid in diagonal fashion. On the balcony walls an interesting fibre board (Celotex texboard) treatment was given to simulate wood paneling in walnut finish. Other restaurateurs who have visited this place pronounce it unusually quiet, the porous walls seeming to drink up the noise of rattling dishes.

**GLASS BLOCK.** blue Vitrolite and fluorescent lighting make the restaurant exterior most colorful; notice the electric eye equipment for automatically opening and closing entrance door.



**INTERIOR WALLS** are finished in insulating board; balcony can be seen at far end of restaurant.



# Restaurant Patrons

The fluorescent lighting in a blue tint consists of four 48" tubes per fixture on the main floor, the fixtures being suspended about four feet from the ceiling. In the center of the ceiling a small dome is illuminated by neon cove lights in a reddish hue. The under balcony and over balcony illumination is provided by 48" fluorescent tubes placed in rows of three each at spaced intervals.

The balcony as viewed from the ground floor through a framed space presents almost a mirror-like appearance. It is reached by a curving stairway in the back and can be used as a private dining room or for parties as the occasion demands.

The kitchen, also fluorescent lighted, and laid out after the best practice, is equipped with gas range, gas broiler and griddle, electric dishwasher, electric roll warmer, steam tables, dumbwaiter to the balcony and other up-to-date accessories. The service center, as will be noted from the drawing, is almost in the exact center of the dining areas. This makes for much step saving.

The concern has a supplementary kitchen on the second floor where vegetables are cooked, leaving the downstairs

kitchen to fill short orders and serve the food cooked upstairs. The restaurant also has its own bakery, located on the second floor.

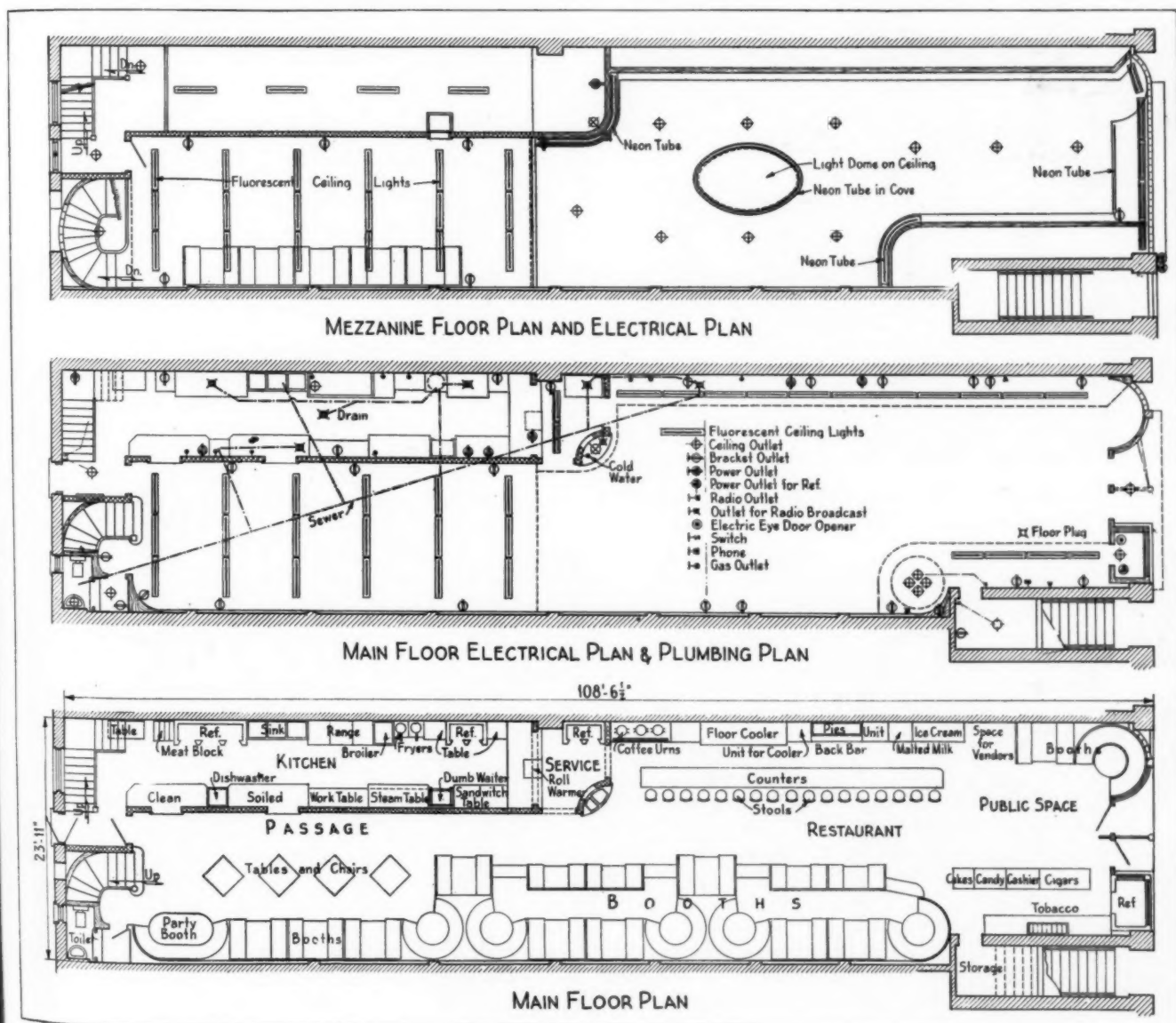
Push button waitress service is provided for the booths which also have remote connections with an automatic phonograph machine. The restaurant is also equipped with a public address system, so the cashier may page a guest anywhere in the house.

The Primos establishment is one of a few which has a built-in, illuminated and refrigerated case in the window for the display of steaks, chops and other meats. A sign in the window carries this invitation, "You pick your choice, we cook it for you."

Main air conditioning equipment for the restaurant is ceiling suspended over the cashier's stand and furred in, making it an attractive built-in feature.

The architect for the restaurant was Henry G. Markel of Jackson, general contractor was Tom S. Carberry.

Materials and equipment include: Electric eye door, The Albert Pick Co.; air conditioning by Carrier Corp.; front, Vitrolite and Insulux glass block; interior wall and ceiling finish, Insulite and Celotex; Majestic gas range; Garland broiler and griddle; Hobart electric dishwasher and sterilizer; Otis dumbwaiter; and General Electric refrigerator.

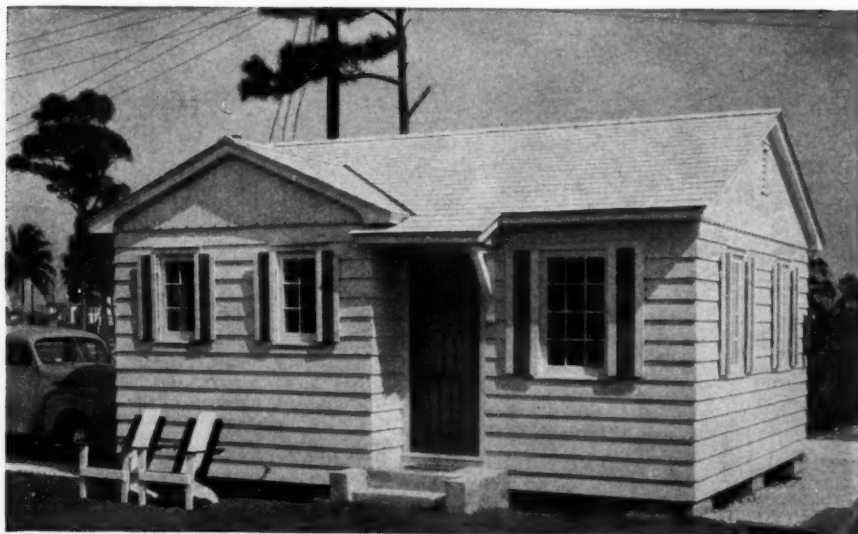


FLOOR PLANS indicate restaurant and kitchen arrangement with details of special electrical and plumbing installations.

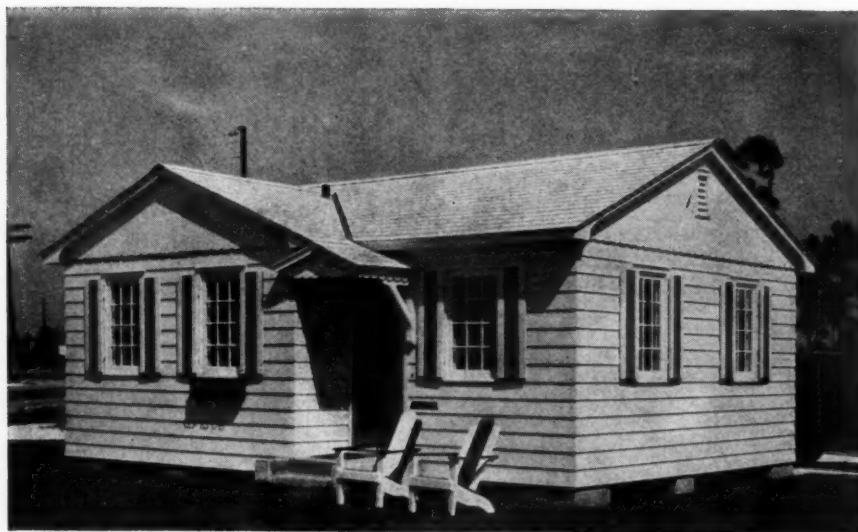


TOURISTS are attracted by the trim lawn and neat Colonial design. Roofs are of white asbestos cement shingles.

## "Flamingo Court" Tourist Cottages



TYPICAL Flamingo cottage with electric kitchen, as detailed in plans on opposite page.



OFFICE on Biscayne Boulevard is larger than the other cottages but has same layout.

**\$70 a week earned in Florida season. Clever 21'-6" x 20'-3" plan permits renting separate rooms. Can accommodate six persons. Complete electric kitchen.**

**T**HESE well designed little tourist cottages are packed full of good ideas, and as a result have proved a very satisfactory investment to the owners, Mr. and Mrs. L. F. Williams. Located on Biscayne Boulevard at 137th Street on the main approach to Miami, Fla., they are kept regularly "full up" during the season and do very well even in the off seasons. They were designed and built by Leslie Stone in close co-operation with Mr. and Mrs. Williams, and were the result of a thorough study of tourist cottages in both the North and the South.

Since the Williamses came from up North, they wanted their cottages to appeal to northerners as well as to fit Florida living conditions. The Colonial design is nicely worked out, and a Florida touch is given by the use of white asbestos cement roof shingles. The cottages are attractively spaced on a large grassy plot with 125 foot frontage. They are surrounded by a private driveway 12 feet wide at the front and 10 feet at the side, leaving the center area open as a pleasant grassy spot for the

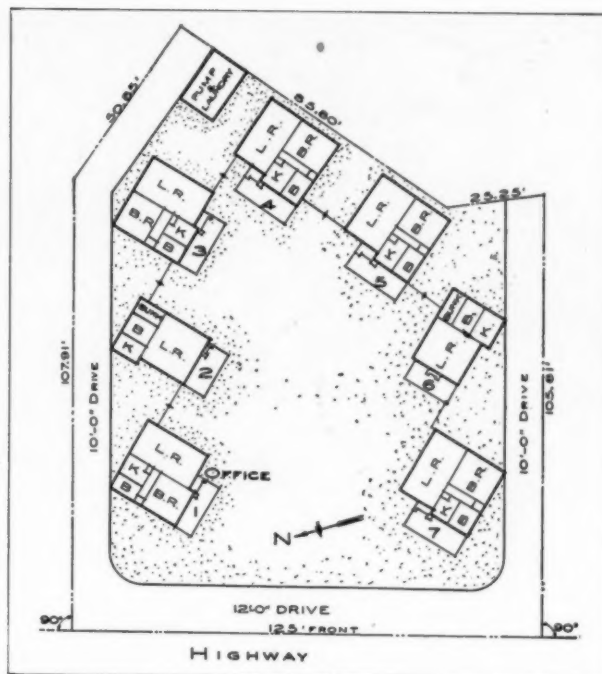
guests to sit and relax and enjoy the Florida sunshine.

The Flamingo floor plans were worked out with particular care. Each cottage has two separate entrances so that one of the rooms can be closed off and rented separately from the balance of the cottage. The large room is equipped with two double studio beds, which in the day-time are folded up and make the room look like a living room. At night these studio beds accommodate four people. A smaller bedroom has a double bed, so that the

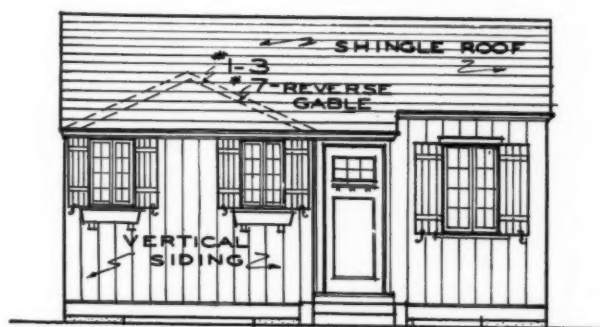
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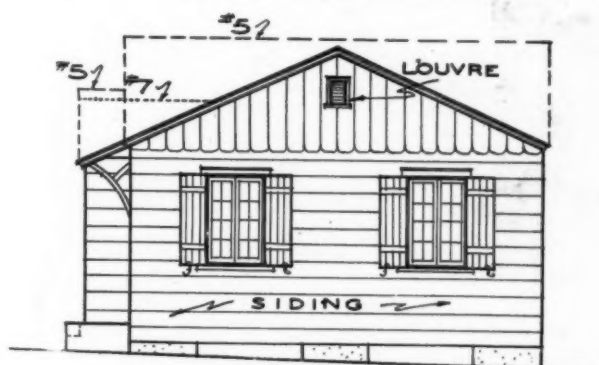
TWO SEPARATE ENTRANCES make it possible to rent cottage to two different parties. Plan shown below.



PLOT PLAN shows how cottages are attractively spaced around a grassy plot, set well back from highway for quiet.



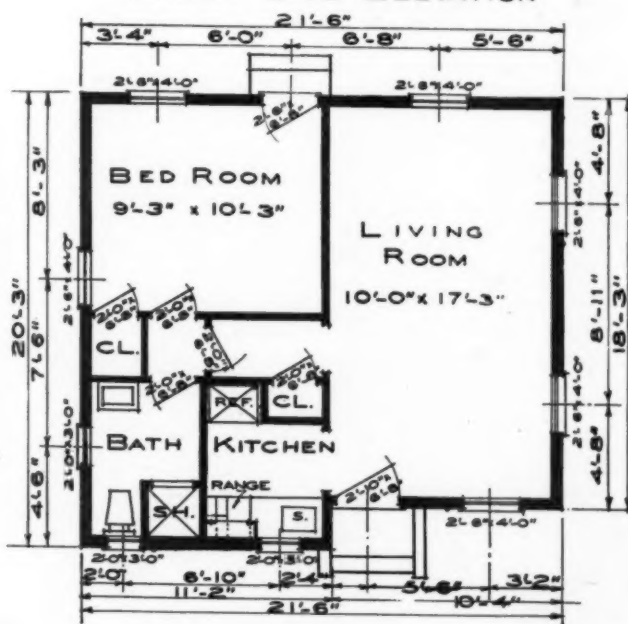
#4 - FRONT ELEVATION  
REVERSE OVERHANG  
#1-3 USE GABLE  
#7 - REVERSE GABLE



RIGHT SIDE ELEVATION



#5 - FRONT ELEVATION  
REVERSE GABLE



VARIETY in exteriors is achieved by changing gables, as shown in dotted lines on detailed plan above.



## Earth Moving Costs Cut

**A** NEW speed in the big job of earth moving for housing and real estate developments has been brought about by the wide use of crawler tractors. Every community these days has a group of tractor operators, quite frequently they are owner-operators, who specialize in the work of clearing and leveling land, digging basements, building roads, cutting down embankments, ridges and hogbacks, filling in the low places and filling in around foundations, moving materials and heavy objects, knocking down trees and pulling out stumps. Almost invariably the tractors are equipped with bulldozers and also frequently with winches.

On the big jobs the tractors are usually owned by the contractors. On the smaller jobs the tractor owner is often a subcontractor. He veritably is the successor of the old-time teamster who with small double-handled scrapers and a gang of shovelers and spademen used to take days to dig an ordinary cellar which with powerful crawler and bulldozer can be dug by one man in two hours or less. And with the ample flexible push-and-pull power available with such a tractor, the landscaping job gets done right. Swampy holes are filled. Crooked streams are straightened. Unsightly embankments are knocked down and ridges with their inconvenient slopes which prevent efficient operation of lawn mowers and other tools are worked down.

### Housing Costs Reduced

The ever-broadening use of these tractors undoubtedly is a big factor in keeping down costs in the numerous low-cost housing projects—both private and public—that are now being conducted all over the country. Accompanying illustrations show International TracTracTors, both Diesel and gas operated, doing a variety of such work in different parts of the country.

**PHOTOGRAPH 1**—Tony Farino, 106-43 Sutphin Blvd., Jamaica, Long Island, uses his new International TD-14 Diesel TracTracTor equipped with Bucyrus-Erie bulldozer with front-end pump for excavating cellars, grading and backfilling, pulling down trees, etc. It is shown at work on a real estate development at 188th Street and Grand Central Parkway known as the Jamaica Estate. The operator said he could excavate a cellar 27 feet by 32 feet and 4 feet deep in three-quarters of an hour and excavate twelve such cellars in a day.

**PHOTOGRAPH 2**—In Seattle another tractor, a TD-9 Diesel, equipped with Isaacson high-lift 8-foot Trac-Dozer, is shown excavating a 50 by 35-foot basement. Previously it had cleared the plot of brush. Charge was \$6 an hour; and tractor was being worked an average of 6 hours a day. It consumed 1½ gallons of fuel an hour at 6¼ cents a gallon. The tractor is employed mostly in digging basements and also does some road work. The tractor is owned by Anderson Brothers, and is shown with Frank L. Anderson, who is in partnership with his brother, A. L.

### Useful for Clearing Site

**PHOTOGRAPH 3**—Across Lake Washington, in Seattle, in the section that is now being opened to home building developments because of the recent completion of the concrete pontoon bridge across the lake, two Diesel TD-6's, operated by two brother-in-law partners, Harold Berndt and Roy Hansen of Bellevue, Washington, are engaged in various development jobs. One of these outfits, equipped with Carco drum and Isaacson 8-foot 3-inch angle dozer, was leveling a tract of land for the Olympic



## By Using Tractor Power

Riding and Driving Academy. It was also used to build road. Other work done by this tractor is logging and land clearing. The second TD-6 was clearing a two-acre estate.

**PHOTOGRAPH 4**—After the house or houses are built comes the job of filling in around the foundations, leveling off the lots and landscaping, a tremendous job in the old days of hand labor but nothing extraordinary at all for one man with crawler tractor. In Portland, Oregon, Oscar Butler & Son, make use of two tractors. One of these, a new International TD-9 wide-tread Diesel TracTracTor equipped with 9-foot 3-inch Trac-Dozer, is shown doing a typical job of landscaping on a real estate development on the outskirts of Portland called the West Slope. Besides cellar excavations and landscaping the Butlers also often contract to build private roads and to work on city streets.

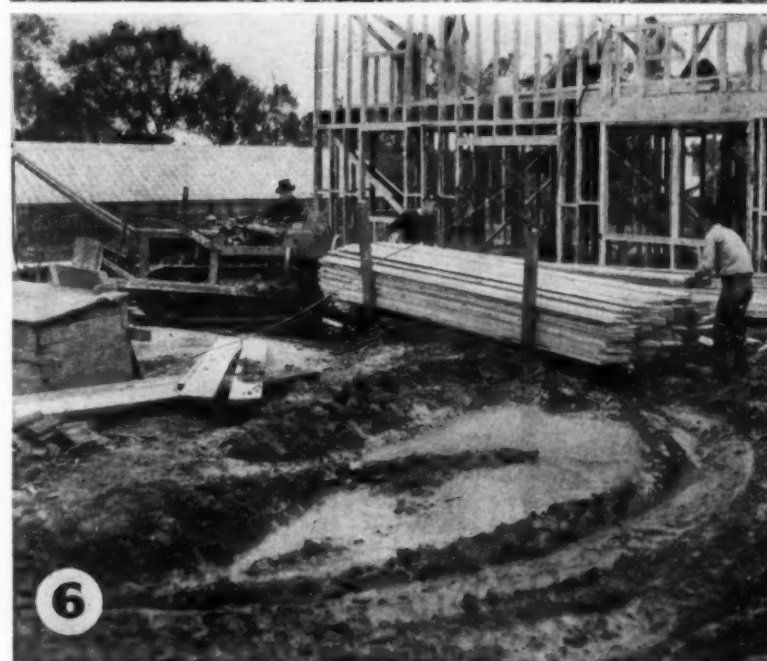
### Busy in Maryland

**PHOTOGRAPH 5**—One of the tractors shown has greatly assisted in the construction of 90 small houses, which were sold to persons who had become convinced that it really is cheaper to own than rent. It is owned by H. M. Brunk of Hyattsville, Maryland, and is shown at work on West Lanham Hills real estate development six miles east of Washington in Maryland just across the District of Columbia line. The development, all wooded, covered approximately 100 acres and 90 four-room houses priced at from \$2,650 to \$3,550 were being built. Eventually it is planned to build 250 of these low-priced dwellings which were being sold as fast as built. Tractor was equipped with Bucyrus-Erie 8-foot angle blade and Garwood winch. It was used to excavate cellars, landscape, build roads and streets (8 to 10 miles of road in entire project), clear out stumps, snake out logs, etc.

**PHOTOGRAPH 6**—In numerous big cities a variety of projects has been inaugurated to provide better housing facilities for low-income people, and thus remove them from unhealthy crowded slum areas. An especially interesting project of this type is one for negroes, being erected by the Alley Dwelling Authority of the District of Columbia, on Alabama Avenue on the outskirts of Washington. It is named the Frederick Douglass Dwellings. One hundred eight buildings are being constructed on a 30-acre site. Some of these buildings are for two and others for three families. All told there will be 313 dwelling or family units. The buildings are in groups of semi-detached and community-type homes about open courts and along curving streets. A feature of the project is a system of convertible rooms, by which one bedroom may be shifted from a 5-room dwelling unit in a group of two or three to an adjoining three-room dwelling unit, thus providing two four-room dwelling units. Living accommodations range from three to six rooms to meet needs of families of various sizes.

### Used on USHA Project

The dwellings are being constructed under a loan contract with the United States Housing Authority. It's a \$1,198,000 project, contract for which was awarded to Jeffress-Dyer, Inc., Washington, D.C. Two International Diesel crawler tractors, a TD-6 and TD-14, were used by the builders in a variety of ways, pulling sleds loaded with materials, landscaping, excavating, etc., to rush the work on this project. L. A. Perry was superintendent in charge of the work. John Ihlder is executive officer for the Alley Dwelling Authority.







## California Builder Develops Bungalow with Rental Units

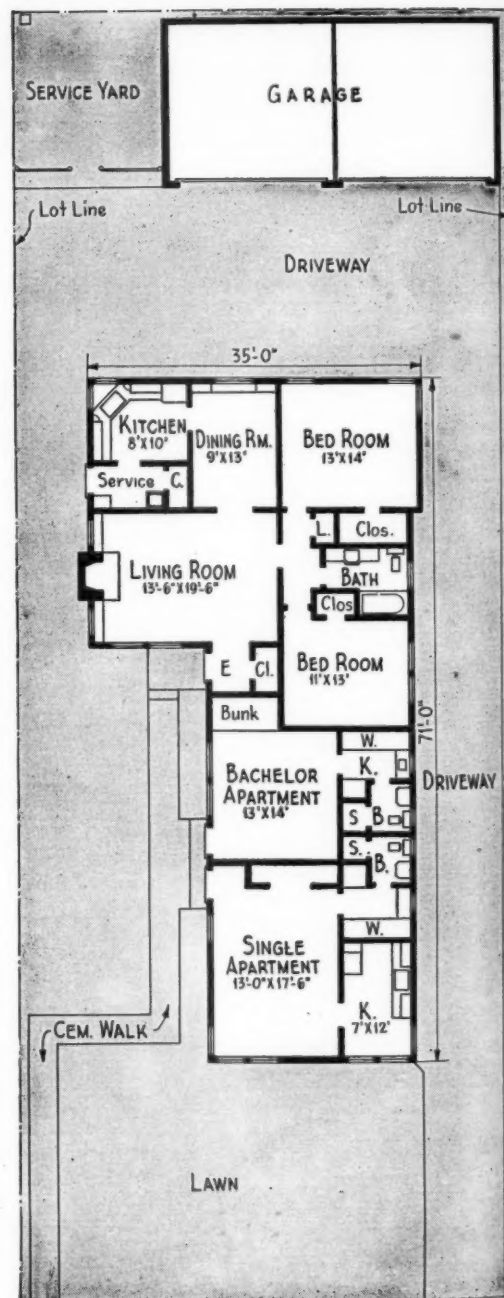
**T**HIS attractive three-unit dwelling, which builder Edward Thayer of Los Angeles has developed as a new type of rental property for the small home buyer, offers something different in the way of a home that helps pay for itself. Its big selling feature, aside from good planning and approved construction methods, is that rent receipts from the front apartments, a bachelor and single, provide the purchaser with an income that goes a long way toward meeting investment costs, and at the same time gives the buyer the privilege of retaining one unit as dwelling quarters. For that reason, the larger, two-bedroom unit with spacious living room and dining room facilities, at the rear, is designated as the owner's apartment. This unit has many conveniences, as shown in the accompanying floor plan, and is the only apartment to be equipped with living room fireplace, tub and shower facilities. The bachelor and single have shower stalls only.

The front single also has a spacious living room and adjoining kitchen with bed stored away against the wall. A bunk arrangement is indicated in the bachelor apartment.

Landscaping (trees and shrubbery) and a lawn sprinkler system were set in to make this type of home and rental property as appealing as possible to prospective purchasers.

Construction details include exterior, stucco with redwood siding for gable ends and redwood trim generally for exterior, including doors. Roof is cedar shingles; garage roof, at the rear, also shingled. Interior: pine woodwork; walls in kitchens, bedrooms and bathrooms are papered; living rooms in single and bachelor, also papered. Walls between apartments have 1" insulation of Thermax as sound deadener. Heating is with Atlas and Andrews wall heaters. The units are vented through the roof and high up from the ground as a termite protection. Oak floors are in rear apartment only; tile is used in bathrooms for trim. Plumbing fixtures are Standard. Among the built-in features are knotty pine cabinets in kitchen and living room.

**UNITS** like the two pictured at the top of page, having a plan as shown at the right (reversed to make facing structures), have been planned and built in the Janss Investment Tract, Westwood Hills, by Edward Thayer. They appeal to the small home buyer who wants to rent two to three units as a help in buying.





## Radiator Interests Set Up "Test Home"

**A** NEW ERA of comfort and economy in homes in America is the goal of a forward-looking group of manufacturers who have provided in the I-B-R Research Home at the University of Illinois (Champaign) the most completely-equipped laboratory house in the world for the scientific study of the efficiency of heating plants under actual operating conditions as well as the effect of various systems of heating on environment and comfort.

The basic purpose of the research program, which has been underwritten for a period of three years, is to develop extensive and accurate data on the how and why of health and comfort in the home. The results of the research program will not only provide manufacturers with valuable information on the design of equipment but will also provide heating contractors with new facts useful to them in their sales promotion work.

The I-B-R Research Home is a typical six-room brick veneer house in the medium price range. The cubage of the main part of the house is 20,630, with 9,700 cubic feet to be heated on the first and second floors and 6,020 cubic feet in the basement.

A thoroughly insulated house was agreed upon as an essential of the Research Home. The walls were insulated with 3½ inches of mineral wool, protected on the inside with a vapor barrier of glazed asphalt paper. Rock-lath was used as the plaster base, and wood sheathing was used and covered with a 15 pound building paper.

All windows were weatherstripped. Storm windows have been purchased but current tests which began with the opening of the house on January 1, 1941, are being run without them.

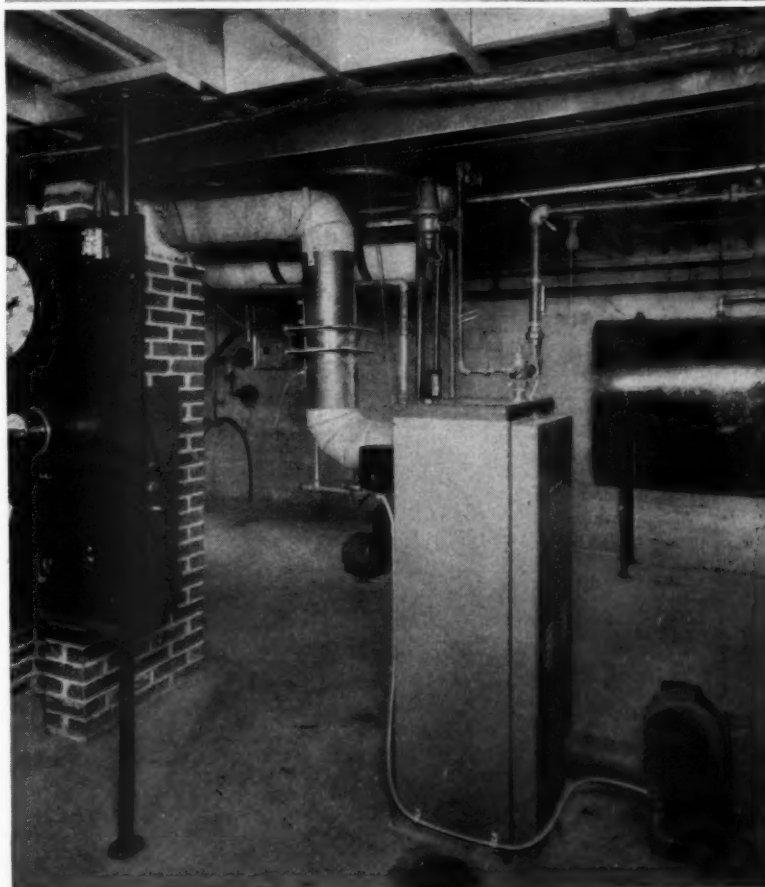
Where radiators are recessed, the mineral wool was omitted and one-inch insulating board used, placed directly against the outside of the wood sheathing, and reflective insulation put over the inside of the sheathing facing the radiator. This construction produces practically the same coefficient of transmission as is obtained with the regular wall. Exceptions to this construction were made in two places. At one window half-inch insulating board was substituted for the inch board. At another, no insulating board was used.

The ceiling of the second floor was insulated with mineral wool, the same as the outside walls. The roof has regular wood sheathing and asphalt shingles.

Before leaving the subject of construction it is important to recall that "comfort efficiency" must be a permanent thing. This requires the insulated construction to be equally permanent. Violent discussions on dew point, condensation, and the destruction that results from insulated houses have been heard in recent years. Some question has also been raised as to the effect of moisture on the framework of a house when it is subjected to all of the vagaries of "air conditioning" with dried out or over-moist air. In view of the importance of this subject in so far as continued satisfac-

tory performance of heating equipment is concerned, it was decided that facts should be obtained on this vital matter. Over 80 moisture measuring points are buried in all parts of the house. As records of moisture conditions are obtained, heating engineers will be able to design installations with the assurance that they will provide the expected service for the life of the house.

Naturally, temperatures at different points in the wall must be compared with moisture changes in order to have  
(Continued to page 138)



RESEARCH HOME of the Institute of Boiler and Radiator Manufacturers at Champaign, Ill., near the campus of the Univ. of Ill. BELOW, view of basement where a one-pipe forced-circulation hot-water system is being tested.



**ATTRACTIVE** six-room home built in River Forest, Ill., by R. W. Bramberg & Co. of Oak Park.

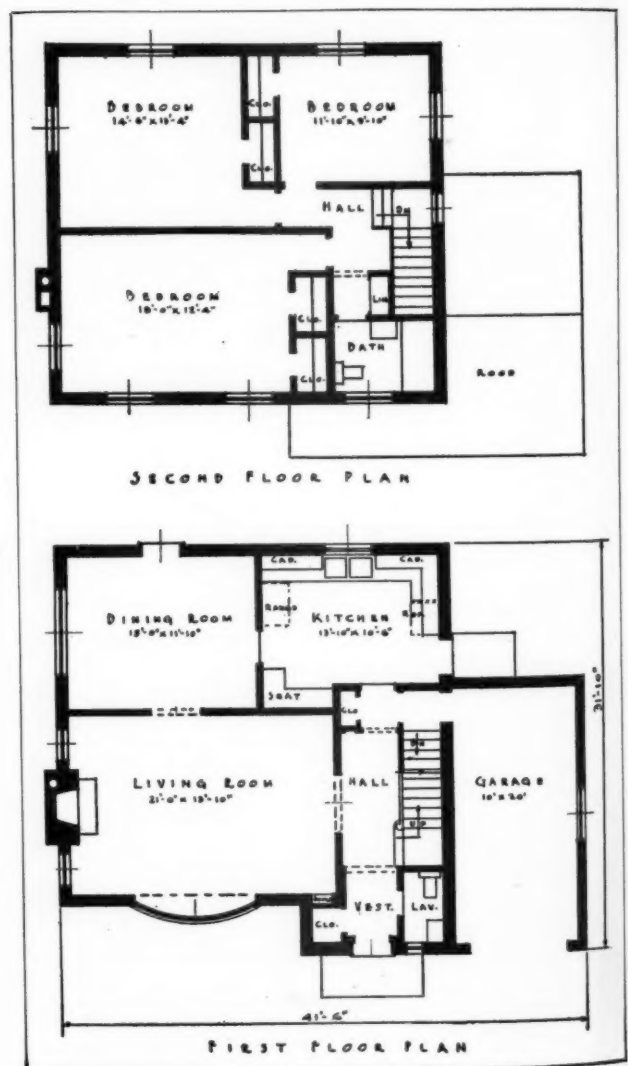
## Another Good Home by a Prize Winning Builder

**W**HILE not as pretentious as the design which won him first prize in the American Gas Association competition of 1939, the home above, by Builder R. W. Bramberg, has many of the same fine qualities. (The prize winner mentioned appeared in the October 1939 issue, pages 36 and 37.)

Attractiveness of exterior design, efficiency of plan, and soundness of construction are outstanding. It is a home which would appeal to the average middle class prospect in size, arrangement and taste.

The six rooms and attached garage are laid out to give privacy and convenience to the first floor, with a through hall providing access to all rooms and facilities except the dining room. The kitchen is efficient, with U-shaped grouping on three sides and built-in seat in the corner. The dining room has a large picture window in one wall and a door to the rear terrace in another. On the second floor, bedrooms are of good size, two of them taking twin beds, and there are four double-end closets. A linen closet is conveniently placed in connecting hall to bath.

From the exterior, the large living room bow window done in an attractively detailed manner dominates the front elevation. The front entrance and garage are nicely handled as a balancing unit. Face brick veneer construction and Flintkote asphalt shingles were used. Other materials and equipment include pre-shrunk framing lumber, USG Weatherwood sheathing, and rock wool insulation, Toncan copper-bearing sheet metal, USG Rocklath and plaster, L-O-F glazing, Armstrong linoleum, McKee garage door, Sunbeam winter air conditioning, Crane plumbing and water heater, Modern Steel Equipment Co. kitchen cabinets, and Lightolier fixtures.







CLASSIC COLUMNS adorn the entrance to this Miami Beach garage.



VENTILATED LOUVRES beautify Palm Beach door.

## Garage Doors That Beautify

THERE is no reason why garage doors should not be as attractive as any other part of the house. To prove this point, *American Builder* presents a few selected garages photographed recently in Florida, where much interesting work is being done in small home architecture.

In many cases the Florida homes are built with the garage projecting out close to the street—certainly the most practical place to put it. This holds especially true in northern climates where snow makes long driveways a burden. The Florida garage doors are usually stock overhead or swing-up types, but the architects and builders have gone to considerable pains to add attractive decorative touches. This is done frequently by nailing on strips of moulding in a simple modern pattern.

Since ventilation is important, many of the doors have ventilating louvres which also become part of the design. The garage entrance surrounding the door is frequently given decorative appeal, which is well illustrated in the classic treatment shown above at the top of the page.



MODERN DOORS as beautiful as a modern automobile.



SIMPLE MOULDINGS decorate garage door.



DELICATE DETAILS give this garage beauty all its own.



# How to Specify for Precast Joist Concrete Floors

## Construction Pointers for Cast-in-Place Concrete Slabs

IN view of the increased interest in the use of concrete for joists and slabs, information on this subject is presented here in condensed form, with the thought that it might be of assistance to architects and builders in preparing specifications. The Portland Cement Association brochure P160A (A.I.A. File No. 4-K) is the source of this material. It is expected that such changes will be made in the specifications as to make them apply to the particu-

lar job for which they are written. The accompanying illustrations are for the purpose of clarifying details referred to. They are not intended as part of suggested specifications.

Precast concrete joists may be left exposed on the underside and painted or a suspended ceiling may be used. An attractive variation in exposed joist treatment is to double the joists and increase the spacing. Where this is done the concrete slab is made 2½ in. thick for spacings up to 48 in. and 3 in. thick for spacings from 48 in. up to 60 in.

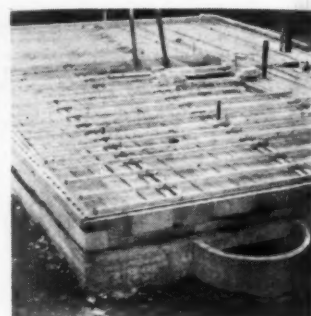
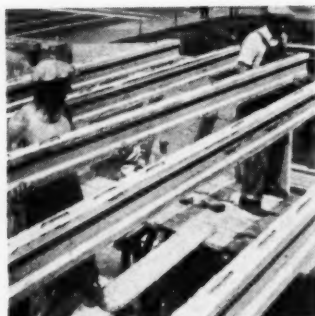
Joists may be doubled by setting them close together or by leaving a space between them and filling the space with concrete.

### Suggested Specifications

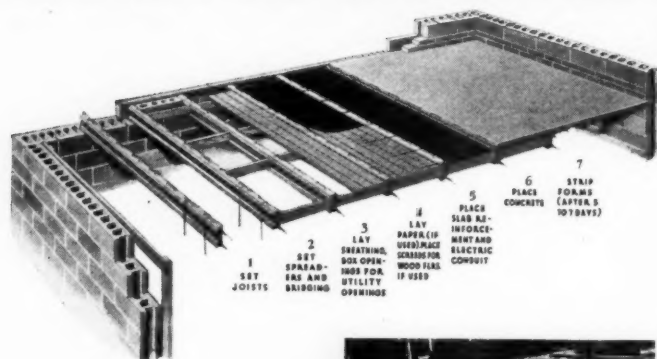
#### I. General

1. Where shown on plans, contractor shall install reinforced concrete floors employing precast concrete joists of approved manufacture with cast-in-place concrete slab.

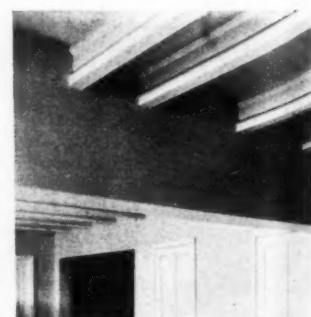
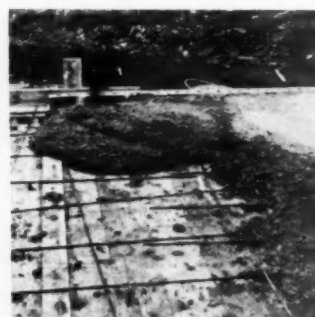
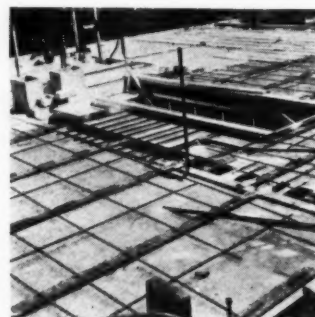
2. Contractor shall provide all scaffolding and equipment necessary to this work.



FOUR views above, left to right: Setting precast concrete floor joists; precast joist framing for first floor complete; inserting spreaders; and screeds in place for wood floor.



ABOVE: Perspective drawing illustrating the seven steps in building a typical precast joist concrete floor, with the steps shown individually in the surrounding small on-the-job views.



THREE views below, left to right: Two-way quarter-inch reinforcement for slab floor; concrete being placed and finished; and finished job after forms are stripped shows joists as seen from below.

lar job for which they are written. The accompanying illustrations are for the purpose of clarifying details referred to. They are not intended as part of suggested specifications.

### General Discussion

Precast joist concrete floors consist of precast concrete joists covered with cast-in-place concrete slab. The joists are usually made in a concrete products plant.

Usual spacing of joists is from 27 to 33 in., depending upon the span and the load. The cast-in-place concrete slab is usually 2 or 2½ in. thick and extends down over the heads of joists about ½ in.

Precast concrete joists are usually made in 8, 10 and 12-in. depths. The 8-in. joists are used for spans up to 16 ft., the 10-in. joists for spans between 12 and 20 ft., and the 12-in. joists for spans from 20 to 24 ft.

Where non-load-bearing masonry partitions are placed parallel to the joists it is customary to double the joists under the partition. If the partition runs at right angles to the joists, usual practice

is to design the floor to carry an additional load of 20 lb. per sq. ft. Contractor shall furnish for architect's approval a joist setting plan and joist framing details including a joist reinforcement schedule showing amount of reinforcement to be used in each joist. Code number shown on setting plans and reinforcement schedule shall be affixed to joists for identification.

### II. Precast Concrete Joists

1. Precast concrete joists shall be manufactured of concrete having an average compressive strength of not less than 3,000 lb. per sq. in. at age of 28 days.

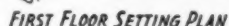
2. Each precast concrete joist shall be reinforced as shown on the plans and reinforcement schedule with deformed longitudinal bars (intermediate grade) in the upper and lower heads and with steel stirrups which shall be effectively connected to the longitudinal bars.

3. Contractor shall furnish metal joist hangers of approved type where required for the framing of joists. At contractor's option joists with preformed tension bar hangers may be used. Supplement (Select if applicable to job):

### III. Setting Joists

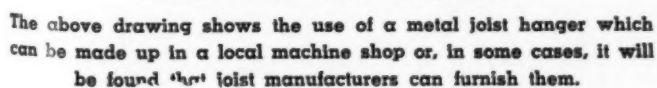
2. Masonry bridging shall be provided at ends of joists where they bear on supports.

A row of shoring of adequate design shall be provided at mid-



Note: Identification mark and size of tension bar should be on each joist

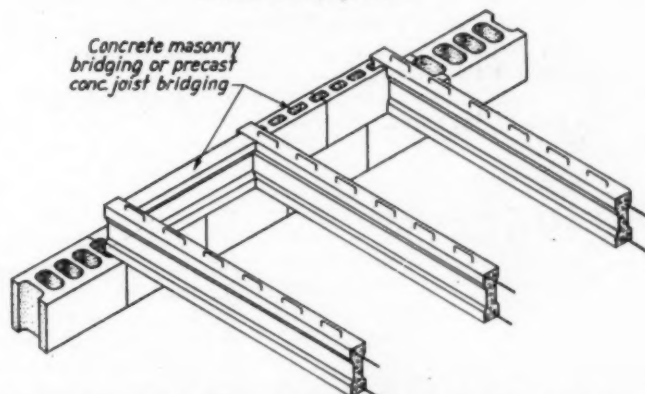
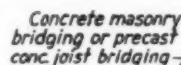
**ABOVE:** Joist setting plan and reinforcement schedule.



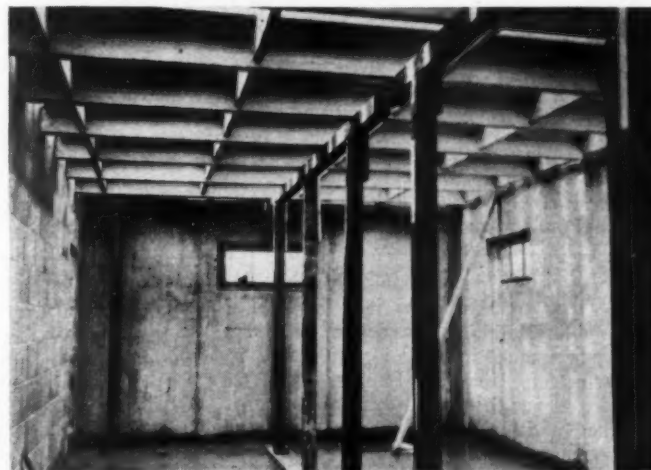
Supplement (For clear spans of 20 ft. or more):

A row of bridging shall be placed at mid-span.

(Continued to page 135)



UPPER drawing above: Method of framing joists into steel beams.  
Lower drawing: Two types of joist bridging. (Note: Specify type of bridging desired. Satisfactory bridging may also consist of concrete masonry jamb units, concrete brick or precast sections.)



**ABOVE:** A common method of shoring joists. Note: (Shoring may consist of 4 x 4-in. wood beams supported on 4 x 4-in. posts at about 4-ft. intervals.)



# SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 92 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to manufacturers at addresses given, mentioning your profession, occupation or business connection with building industry.

## WHAT'S NEW IN BUILDING MATERIALS

**AB493** Harris Flooring Company, Johnson City, Tenn., is producing perfectly straight edge flooring of Appalachian oak and hard maple with several special features as illustrated. Special machinery removes all side bends and crooks, producing perfectly straight pieces of flooring. Nail groove, mastic trap,



CROSS section Harris brand strip flooring.

rounded bottom edge and double back channel are some of the special features. In addition to this strip flooring, Colonial planks and flooring blocks are produced. The Harris plank flooring is either solid or "RiBac," that is, reinforced with cross ribs or splines dovetailed into the back at 8-inch intervals.

**AB494** The Unique window balance, first introduced in 1930, has grown in use from 900 the first year to approximately 6 million balances made and sold in 1940, according to the manufacturer, Unique Window Balance Corp., New York City. The Unique sash balance, as illustrated, is a compact, self-contained mechanical device employing a coiled spring enclosed in a rust-proof metal tubing. Actuated by a spiral rod, the sash floats on this balance, moving freely up and down from any point. Tension is adjustable to various weights of sash. Four balances to a set for one D-H window.

UNIQUE window sash balance; 13 million now in use.



**AB495** "Armstrong's Floorings and Wall Coverings for Homes and Public Buildings," a deluxe brochure of 40 pages, much in full color, is offered by the Armstrong Cork Co., Lancaster, Pa. It contains a wealth of decorative suggestions together with detail specifications for the guidance of architects, builders and floor and wall covering installers.

**AB496** "Paint Progress" is an illustrated periodical put out from time to time by The New Jersey Zinc Co., 160 Front St., New York City. The current issue is devoted to farm painting with a comprehensive article, "What's New in Farm Painting." Another timely feature presents the United States Army, Navy and Housing Authority specifications for outside and inside painting.

**AB497** Suggested specifications for Lustraglass are offered by the American Window Glass Co., Pittsburgh, in a dramatic 10 page folder illustrating many uses and building types. The manufacturing process, which produces this new sheet glass which "looks like plate glass but sells at window glass prices," is revealed. "Lustra-blu," a window glass to cut down glare is also covered.

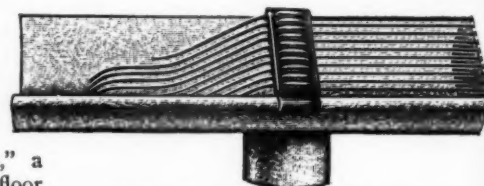
**AB498** "Truscon Floor-Patch," a non-shrinking concrete floor patching compound for quick, over-night repairs, is presented by The Truscon Laboratories, Detroit, in a new 2-color, 2-page data sheet. "Floor-Patch" has that highly desirable quality of producing a non-shrinking patch which adheres tightly to the surrounding concrete surface. It is adaptable to quick, overnight repairs since the patched floor may be used for light traffic next morning. It is shipped in 10-pound cans and 50-pound drums ready for use by adding water only.

**AB499** "Exposing The Termite" is an authoritative treatise prepared by the National Lumber Manufacturers Assn., Washington, D.C., to inform the building industry of the nature and extent of the termite menace and how to guard against it. "Construction methods, not materials, stop termites," according to these experts, and effective termite prevention measures are clearly illustrated and described. The habits of these pests are pictured and explained.

**AB500** "Cabinet Hardware for Beautiful Kitchens and Bathrooms" is a 6 page catalog-folder with detailed illustrations and descriptions of the complete "Amerock" line of cabinet hardware offered by the American Cabinet Hardware Corp., Rockford, Ill. Three design groupings are featured at graduated price levels—DeLuxe, Streamlux and Standard.

**AB501** "Ing-Rich Porcelain Wall Panels" is the title of a deluxe 6 page folder in full color offering bathroom beauty and utility at low cost. These enamel steel wall panels are now offered in rich shades of green, blue, yellow, cream, black and white. These are all illustrated in this folder, together with step by step instructions for the easy standardized installation of these improved wall panels.

**AB502** Down spout trouble is cheaply and quickly eliminated by a line of wire eaves trough shields developed by Right-Way Shield Co., Spitzer Bldg., Toledo, O. Illustration shows one of several types and sizes. All have the patented feature which makes these guards



RIGHT-WAY eaves trough shield.

self-cleaning. The water flows under the leaves, floating them up the streamlined, inclined shield and out over the top. Construction is of No. 10 rustproof wire.

**AB503** The General Cable Corp., New York City, offers a concise, timely treatise (24 pages and covers), "Interpreting the New Code In Terms of New Building Wires." It simplifies the new National Electrical Code involved in a new ruling on thin, heat-resisting and synthetic insulation. The ratings of the newly recognized types of wires and the new ratings for Type R are graphically shown in tables for both the new and re-wiring classes of work.

**AB504** "How to Select the Right Hardware for Your Home" is discussed by the McKinney Mfg. Co., Pittsburgh, in a new 8 page data sheet. Of particular interest to draftsmen and home planners is the sheet of heavy cardboard, "McKinney Furniture Cutouts." These are drawn 1/4-inch to 1 foot and are a great help in studying room sizes. Furniture pieces included in this cardboard cutout are double bed, twin beds, day bed, dressing table with bench, chaise lounge, dining tables (3 styles), side board, china cabinet, teawagon, piano with bench, davenport, desk, bridge table, coffee table, book case and a dozen different types of chairs.

Readers Service Department Continued to Page 88

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 92





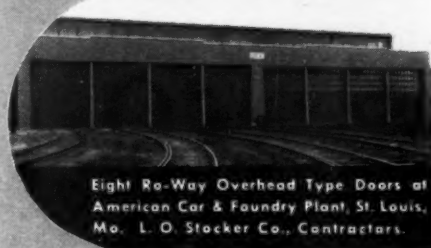
This attractive home of the Builder-Owner, Henry W. Bruning, Toledo, Ohio, is complimented by the pleasing design of a single Ro-Way Overhead Type Door, for the 2-car attached garage. Architect, Karl N. Becker, Toledo, Ohio.

# IT'S "3 to 1" Ro-Way

OVERHEAD TYPE DOORS  
WILL SAVE YOU MONEY!



Syosset Garage, Syosset, Long Island, N.Y., equipped with 4 Ro-Way Overhead Type Doors. Krebs & Schulz, Contractors.



Eight Ro-Way Overhead Type Doors at American Car & Foundry Plant, St. Louis, Mo. L. O. Stocker Co., Contractors.



Ro-Way Overhead Type Garage Door in Bellevue Fire Station, Memphis, Tenn. Redlinger & Hanson, Contractors.

If you are in the market for Residential, Commercial or Industrial Doors, it's three-to-one Ro-Way can save you money. Here's why . . .

- 1st. All Ro-Way Models are priced to meet or beat competition, and still give you added value without extra cost in advanced engineering and design.
- 2nd. Some of these improvements lower installation costs, and cut future service calls to a minimum.
- 3rd. Because the Ro-Way Line is so complete, the Ro-Way Dealer often can, and does, recommend the use of a less expensive model of door than has been considered.

## So it's "3 to 1" that Ro-Way Can Save You Money

Anyway, you can't afford to overlook the extra values Ro-Way gives in these five exclusive improvements . . . "Crow's Foot" Outer Bearing Support . . . "Ro-To Live" Spring . . . "Zip-Lock" Adjustment . . . "Tailor Made" Springs . . . and Parkerized and Painted Hardware.

Write for Free Ro-Way Door Folders,  
Prices and Complete Information.

**ROWE MANUFACTURING CO.**

724 Holton Street • Galesburg, Ill., U. S. A.

## Ro-Way Service is Nation-Wide

Sales Offices, with competent installation engineers, are located in principal cities. Write for name of one nearest you.

ROWE MANUFACTURING CO.,  
724 Holton St., Galesburg, Ill.  
Gentlemen: Please send me Free Descriptive Folder and Price List  
on Ro-Way Overhead Type Doors.

Name.....

Address.....

City..... State.....

*There's a Ro-Way for every Door way!*

## SERVICE TO READERS

**EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 92 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.**

### EQUIPMENT ITEMS FOR MODERN BUILDINGS

**AB505** The "Super Hot" line of instantaneous water heaters, manufactured by the Water Heater Div. of The Superior Railway Products Corp., Pittsburgh, includes models No. 3, 4 and 5



MODEL No. 3

which deliver per minute 3, 4 and 5 gallons, respectively, of hot water for a home, store or other business use. This is an instantaneous heater constructed on a new principle that is said to be three times as effective in heat pick-up as any other so far produced. The No. 3 model is 39 inches high by 17 1/4 inches wide, requires 1.6 sq. ft. floor space.

**AB506** "Color" is featured in a new brochure by the General Electric Home Bureau, Bridgeport, Conn., presenting G-E all-electric kitchens. Six different kitchen layouts and six different decorative color schemes are illustrated. "Gay colorful kitchens individualized to your taste" is the appeal directed toward women; and builders can take advantage of their undoubted interest in these kitchens.

**AB507** Electric service load centers used in the open should be protected from the elements. The (F-A) Raintite enclosure, offered by Frank Adam Electric Co., St. Louis, is for outdoor ap-

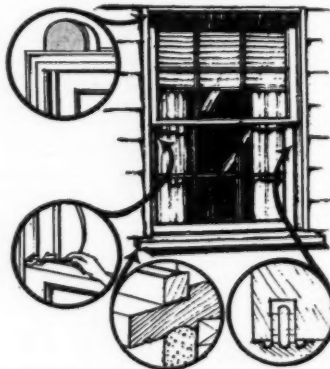


FRANK Adam Raintite enclosure for outdoor load centers.

plication—in connection with yard lighting, signs, flood lighting and general use. It is impervious to rain, snow and sleet. The box is of galvanized steel, the cover Bond-erized to prevent corrosion—all with gray enamel finish. Hinged cover may be pad-locked to prevent tampering. For load centers and service equipment of 2 to 16 circuits, 120 volt; large assemblies also.

**AB508** A blueprint showing plan and details of correct fire-place construction is offered free to architects, builders and dealers by the La Salle Mfg. Co., Wyandotte, Mich. This accompanies the data sheet on La Salle dome dampers, flat dampers, ash pit doors, ash dumps, etc., for which this company is well known. A serviceable package receiver is also featured. It is of substantial construction with cast iron frames and doors and telescope of galvanized steel. Two sizes, 10 1/4" x 12 3/8" and 9" wide. A built-in mail box in several styles is another La Salle item.

**AB509** The Roll-O-Seal roller-bearing window is a double-hung window unit, factory fitted to accuracy with frame ready to install—a product of Roll-O-Seal, Ltd., Los Angeles. Quick removal for cleaning or open air ventilation



ROLL-O-Seal roller bearing window—an improved unit.

is one of its features. Also a well liked detail is the narrow mullion post, 1-9/16 inches between window openings, which is said to be the narrowest mullion on the market. This window is equipped with headline balance and roller bearing jams to eliminate friction, rattling, sticking or binding.

**AB510** The Square D Co., manufacturer of electrical equipment, Detroit, has brought out the spring issue of "Square D Digest" (No. 126, dated April, 1941). It is a data book of 76 pages, a condensed catalog containing listings and latest prices of many Square D products, including safety switches, service equipment, multi-breakers and other circuit breakers, panelboards, motor control and pressure switches. The book is well indexed and thoroughly illustrated.

**AB511** Shepard HomeLifts for invalids and older folks for private residences are featured very attractively in an 8 page brochure, "The Open Door to a New Life," by The Shepard Elevator Co., Cincinnati, O. These automatic home elevators are operated from the lighting circuit and have great utility.

**AB512** Stewart plain and ornamental railings together with trellis work, bracket and pier lanterns, interior gates, grilles, etc., are presented in catalog No. R-38 (24 pages) from The Stewart Iron Works Co., Inc., Cincinnati, O. A quantity of authentic design suggestions will be found.

**AB513** Burt roof ventilators are illustrated and described in a big looseleaf portfolio from The Burt Mfg. Co., Akron, O. Ventilators for industrial plants and commercial buildings of all kinds are completely detailed.

**AB514** Donley steel attic ventilators, which are said to cost less than wood and are easier to install, are detailed in a two-color folder from The Donley Brothers Co., Cleveland. These unit ventilators come in four sizes ranging from 23 to 84 square inches of free ventilating area. Authorities now agree that under-roof space should be ventilated; here's how.

**AB515** Hotstream illustrated price catalog No. 41 has just come off the press, an impressive book of 42 pages from The Hotstream Heater Co., Cleveland, O. In addition to the very extensive line of Hotstream water heaters, a new gas-fired warm air floor furnace is illustrated and described. This comes in six different sizes. Gas-burning, wall insert room heaters in several models are also featured in this data-packed gas equipment book.

**AB516** New Caldwell sash balances are offered attractively in a 6 page data sheet from The Caldwell Mfg. Co., Rochester, N. Y. The various sizes and styles are illustrated and their proper installation detailed.

**AB517** Acme sash balances as developed by The Acme Spring Sash Balance Co., Los Angeles, are presented in a new folder. Three types are illustrated, the overhead type, the side type and the Acme twin or double unit type. How to install these is clearly detailed.

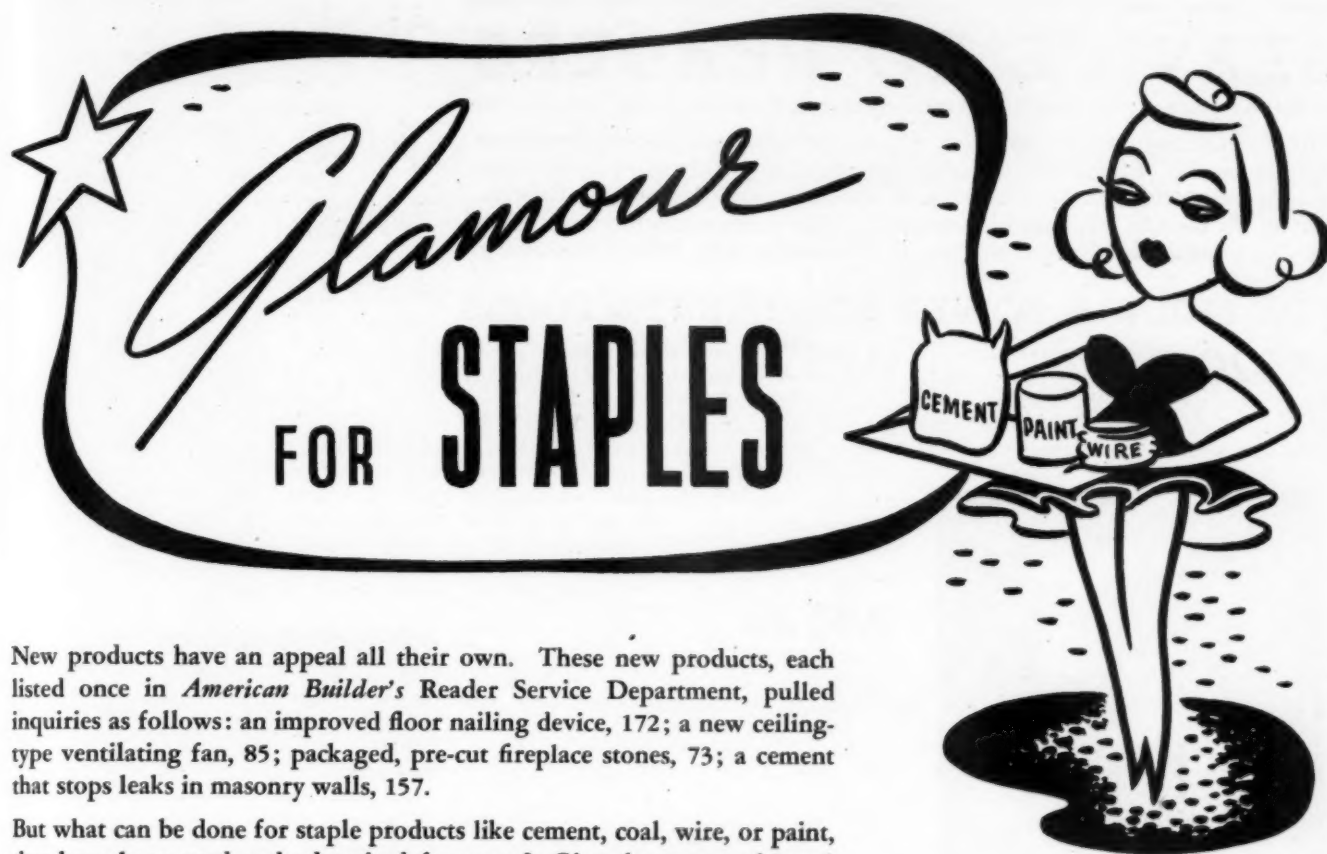
**AB518** Copper convectors or radiators, by Tuttle & Bailey, Inc., New Britain, Conn., are featured in a new 12 page data sheet, "Catalog No. C4." The principle of copper convectors, their cost and recommended details of installation are clearly presented.

**AB519** Rustic red cedar for ornamental fencing, gates and garden houses is featured in a beautiful design portfolio of 20 pages by National Cedar Post & Pole Co., Omaha, Nebraska.

Readers Service Department Continued to Page 90

**FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 92**





New products have an appeal all their own. These new products, each listed once in *American Builder's* Reader Service Department, pulled inquiries as follows: an improved floor nailing device, 172; a new ceiling-type ventilating fan, 85; packaged, pre-cut fireplace stones, 73; a cement that stops leaks in masonry walls, 157.

But what can be done for staple products like cement, coal, wire, or paint, that have been used and advertised for years? Give them new glamor? Sure, by offering well written supplementary reference literature, planning ideas, or how-to-do-it material. For example, these staple items, each listed once, pulled inquiries as follows:\* a pocket size painting handbook, 164; concrete reference table, 362; a manual of house chimney construction, 252; how to build outdoor fireplaces, 102; guide to house wiring, 254.

Building products properly presented in *American Builder* will pull inquiries. During five months ended March, 1941, *American Builder* has forwarded 10,636 inquiries to manufacturers whose products or literature were described in its Reader Service Department, not counting those sent direct. And these manufacturers know from experience that *American Builder* inquiries mean business.

\*Note that the older, staple products consistently out-pulled the new ones.

## AMERICAN BUILDER

A Simmons-Boardman Publication

185 W. Adams Street  
CHICAGO

30 Church Street  
NEW YORK



**AMERICAN BUILDER**  
AND BUILDING AGE

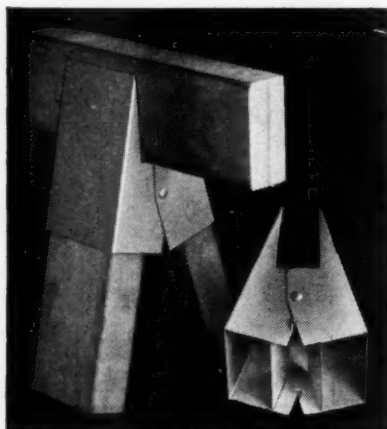
*The World's Greatest Building Paper*

## SERVICE TO READERS

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### NEW MODELS, POWER EQUIPMENT & TOOLS

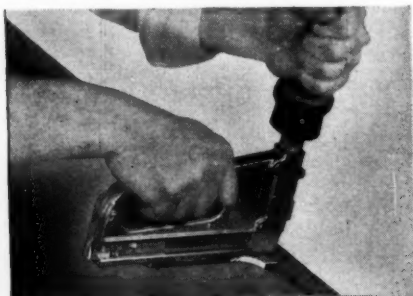
**AB520** "Ironorse" metal joints for saw horses, trestles, tables, etc., are made by Panellit Displays, Inc., Chicago. They are made of pressed steel and have a scissor grip—"the heavier the



"IRONORSE" steel saw horse connector.

load the tighter the hold." Horses built with these metal joints are easily and quickly assembled. They fit standard size 2 x 4 finished lumber. Come in rustproof aluminum finish.

**AB521** A revolutionary new weatherstrip tacker has just been brought out by the Heller Co., Cleveland, well known makers of tackers, staplers and stitchers for all types of fastening operations. Coming out at a time when skilled help is scarce, and speed in production is

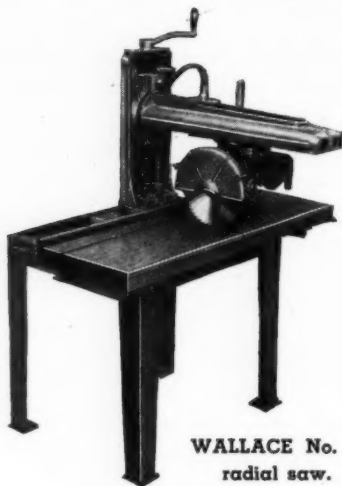


NEW Heller weatherstrip tacker.

essential, this tacker is three times faster than the hammer and brad method. No longer is it necessary to punch a hole, then drive a nail into this hole. The Heller weatherstrip tacker drives staples through lighter gauges of metal, with one press of the plunger doing the entire job.

**AB522** How to sit down to a floor sanding job is revealed by Wodack Electric Tool Corp., Chicago, in a new circular describing the "Do-All" disc sander with its accompanying ball bearing casted stool on which the operator sits while sanding up to the quarter round. Why not get up off your knees and enjoy your work? This sit-down equipment looks O.K.

**AB523** An improved radial saw with a newly designed stand and table is announced by J. D. Wallace & Co., Chicago. The new table facilitates the efficient use of the radial saw for handling cross cutting, angle cutting, mitering, bevel angle cuts, ripping, bevel



WALLACE No. 1 radial saw.

ripping, shaping, rabbetting, tenoning, dadoing, grooving and many other milling operations. It is designed to permit cut off and angle work on both the "push" and "pull" strokes of the motor alternately. New geared motors of one or two h.p. have a spindle speed of 4900 r.p.m.,—adequate for fine shaping and routing work,—and with blade capacities up to 11" in diameter, cutting up to 4 inch material.

**AB524** "American Floor News" is an attractive little newspaper issued from time to time by The American Floor Surfacing Machine Co., Toledo, for the benefit of flooring contractors. The current spring issue has a very helpful discussion on Choice of Abrasives as Affecting Profits. Another article presents a timely statistical review under the title, "The Biggest Spring Building Season In Years Is Forecast." 18,000 floor contractors are on the mailing list for this floor surfacing business paper. Are you?

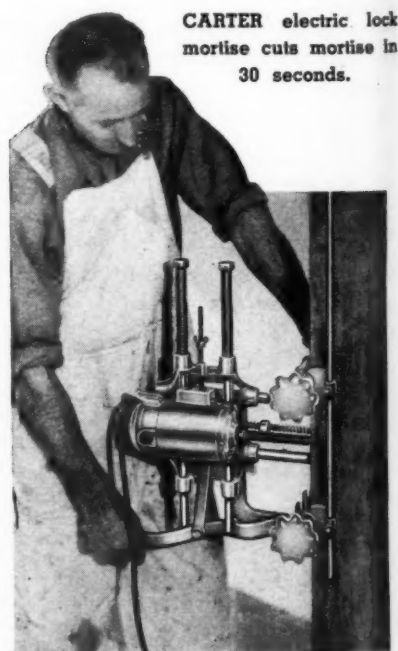
**AB525** The Master Woodworker Mfg. Co., Detroit, has issued a new 4 page data sheet featuring its "12 Machines Combined in 1," or a complete woodworking shop in 1 machine. Power is supplied by gasoline motor for use where electric power is inconvenient. Being a portable machine, the Master Woodworker takes the shop right to the job to cut costs.

**AB526** The Crofoot screen tacker (J. B. Crofoot Co., Mount Prospect, Ill.,) with the new reversible claws makes it possible for the screen man to draw or push his screen wire tight. The result is a screen "tailored" to fit snugly, one that avoids unsightly bulges and "creeping up" along the edges. This is a new improvement typical of those which have been made constantly in Crofoot tackers during the last 25 years. This has resulted in thousands adopting Crofoot products for various stapling and tacking operations in the screen shop.



CROFOOT screen tacker.

**AB527** A new light weight electric lock mortiser is offered by The R. L. Carter Division, New Britain, Conn. Adjustments for setting depth and length of the mortise are accurate and simple. Two self centering clamps center the lock mortiser on the door and insure that every mortise will be in the center of the door regardless of the thickness. Once the machine is set for a mortise, the height rod is adjusted so that all succeeding doors will have the mortise properly located. Actual cutting time is about 30 seconds per mortise and the quality is much superior to hand chiseling.



CARTER electric lock mortise cuts mortise in 30 seconds.

Readers Service Department Continued to Page 92

**FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 92**



# Maybe this Answers Your Question

## Fleisher Engineering & Construction Co. GENERAL CONTRACTORS

FORT KNOX, KY.  
TELEPHONES  
NOS. 248, 271 AND 753

Des Bldg., 110 Pearl St.  
BUFFALO, NEW YORK

REPLY TO  
P. O. BOX 1799  
LOUISVILLE, KY.

March 4, 1941

Grand Rapids Hardware Company,  
Grand Rapids,  
Michigan.

Re: Defense Housing Project  
Fort Knox, Kentucky

Gentlemen:

We are rapidly completing the installation of 7,000 sets of your Invisible Sash Balances for the Defense Housing Project which we are constructing at Fort Knox, Kentucky, for the Public Buildings Administration.

We are so pleased with the manner in which these Invisible Sash Balances are operating that we want to express our satisfaction with your product.

We have found the Grand Rapids Invisible Sash Balances very easy and simple to install. We are exceedingly well pleased with the fact that we have not had to replace any of your sash balances. This is contrary to our experience on other Projects with other balances.

On other Jobs where we have used different sash balances, we have found it necessary to replace a large percentage of them even before we are able to obtain acceptance of our work.

We hope that we will be able to obtain another Project using sash balances. We can assure you that we will use the Grand Rapids Invisible Sash Balances if the design is such that double hung windows are used.

Very truly yours,

FLEISHER ENGINEERING & CONSTRUCTION CO.

*R. W. Taylor*

Construction Manager

RWT:I

# ... as to which Balance is Best!

Write for CATALOG 41-SB-1, illustrating and describing the "GRAND RAPIDS INVISIBLE" Sash Balance, with detail drawings of window installations, with and without weather stripping.

GRAND RAPIDS  
*Invisible*  
SASH BALANCE

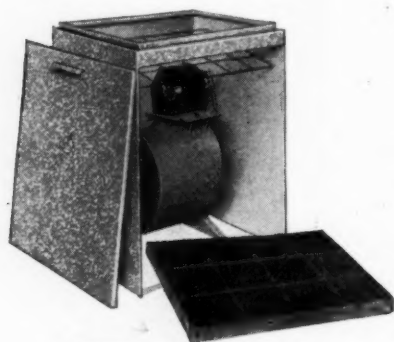
GRAND RAPIDS HARDWARE COMPANY  
GRAND RAPIDS, MICHIGAN

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### HEATING AND AIR CONDITIONING

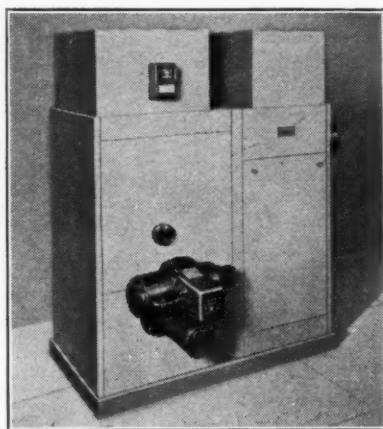
**AB528** Viking Air Conditioning Corp., Cleveland, O., has a new small package unit that will convert a standard gravity furnace installation into a modern forced air system at a negligible increase in cost. This unit, designated as the Model EP-O1, cleans, filters and forces warm air from the furnace to every room. The sturdy steel cabinet of the Model



VIKING furnace fan unit.

EP-O1, is finished in hammered silver which harmonizes with galvanized casings, ducts and fittings. It measures 24½ inches wide, 20 inches deep and 30 inches high. The quiet operating Viking blower has a capacity of 850 CFM for furnaces of 65,000 BTU output. The 1/6 h.p. top mounted motor with V belt drive is mounted on an adjustable base for proper belt tension. Bearings are rubber mounted, self aligning and self-lubricating—they require no attention for a period of three years. A filter, 20 inches by 25 inches, is self-sealing, and can be easily removed and replaced.

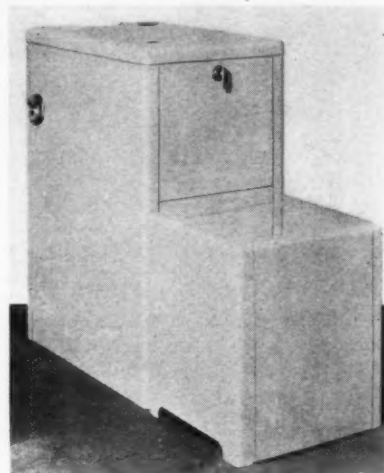
**AB529** This new oil burning air conditioning unit is designed for small homes. It is manufactured by the Heating Div. of the Anchor Post Fence Co., Baltimore, Md., and is a new item in that company's line of ASF steel furnaces. It has a maximum capacity of 80,000 BTU at the bonnet. Construction is in two compartments, one for blower and filters and the second for the heat exchanger itself. Air enters the duct connections at the top to the right and is filtered,



ANCHOR air conditioner Model ASF-0.

circulated by a blower over the primary and secondary heating surfaces, and then enters the warm air plenum chamber at the left. A humidifier in which the water level is constant and automatically controlled is located in the warm air supply plenum chamber. Blower capacity is 1000 CFM.

**AB530** A new small home automatic hot water heating unit for oil or gas firing has been placed on the market by the Pierce Butler Radiator Corp., Syracuse, N. Y. This unit, called the Pierce-Popular, will develop a



PIERCE-Popular heating unit.

heating capacity that is ample for the average 6 or 7 room house and is built in sizes with heat ratings from 300 to 600 sq. ft. of water. Standing only waist high, with a streamlined, jade green cabinet, its compactness and appearance make it suitable for use in homes without basements or heater rooms since it can be placed in the kitchen or other main floor rooms without detracting from the appearance of the room, where it can also serve as a radiator.

**AB531** Sarcotherm weather control for hot water heating is explained in an attractive 8 page data sheet from Sarco Co., Inc., New York City. By simple mechanical means plus an outside thermometer this fully automatic system operates to create uniform room temperatures under all weather conditions.

**AB532** The Warco Moisturator manufactured by W. A. Russell & Co., Bridgeport, Conn., is explained in a 4 page data sheet with simple diagrams. The moisturator is used under radiators and in furnace bonnets to supply needed moisture.

**AB533** Air conditioning pipe and fittings "Moncrief" brand are detailed in a new 20 page catalog, No. 41AC from The Henry Furnace & Foundry Co., Cleveland, O. Forty years' experience with heating contractors' requirements are reflected in this complete catalog for dealers, builders and heating contractors.

**AB534** Florence oil heaters, product of the Florence Stove Co., Gardner, Mass., are illustrated and described in new catalog No. 501. This company, established in 1872, has built up a very extensive line of oil heating equipment, "A type of heater for every heating need." These are of the sleeve-type, pot-type and wickless-type kerosene burners. Circulating heaters, radiant heaters and cabinet type heaters are included. The "Driven-Aire" model has an electric rotor diffusing unit.

### CLIP AND MAIL TO CHICAGO

Reader Service Department  
American Builder,  
105 W. Adams St., Chicago, Ill.

(May, 1941)

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers.....

.....

Name.....

Street.....

City..... State.....

OCCUPATION\*.....

\*Please note that occupation must be stated if full service is to be given





# HOW TO MAKE People Talk BEHIND YOUR BACK



—and here's a case where such talk will do you good!

Whether you are building houses for resale or on contract, Curtis Stock Architectural Woodwork will help advertise your ability and good judgment.

Look at these designs! They're STOCK with Curtis—not special-made! And they'll fit into the budgets of almost any house job,

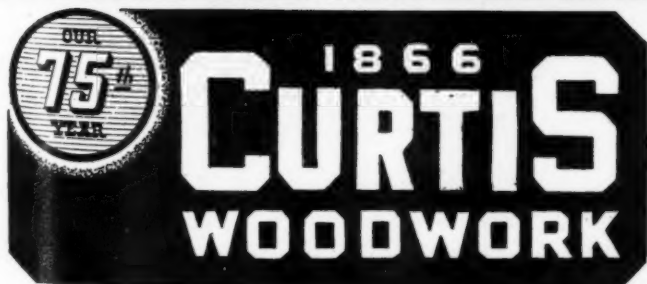
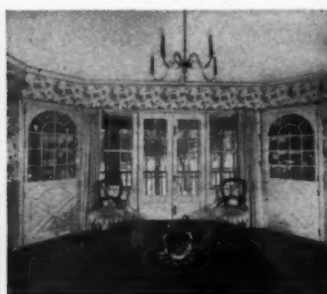
large or small, in any size or price range.

Prominent architects plan these mantels, entrances, stairways, cabinets, and other woodwork for Curtis. Then we put them into quantity production. Curtis workmanship has no superior: you are assured of joints that won't open; mouldings that won't loosen; surfaces that are ready for any finish; minimum installation cost on the job.

Curtis Architectural Woodwork can be a good salesman for you. Its performance means lasting satisfaction for your customers. Best of all—there's no delay—because this woodwork is in stock!

Ask your local Curtis Dealer for literature or mail this coupon. If you live in Canada—write W. C. Edwards & Co., Ltd., 991 Somerset Street, West, Ottawa, Canada.

**CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE**



**CURTIS MAKES A COMPLETE LINE OF STOCK ARCHITECTURAL WOODWORK  
75 YEARS OF DEPENDABILITY IS BEHIND THIS TRADEMARK**

**CURTIS COMPANIES SERVICE BUREAU  
Dept. AB-5W Curtis Bldg., Clinton, Iowa  
Tell me all about Curtis Architectural Woodwork.**

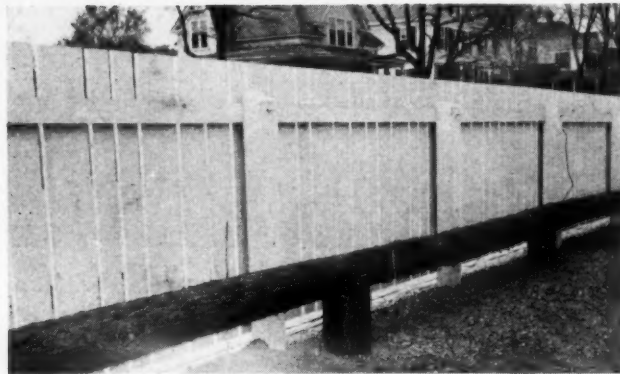
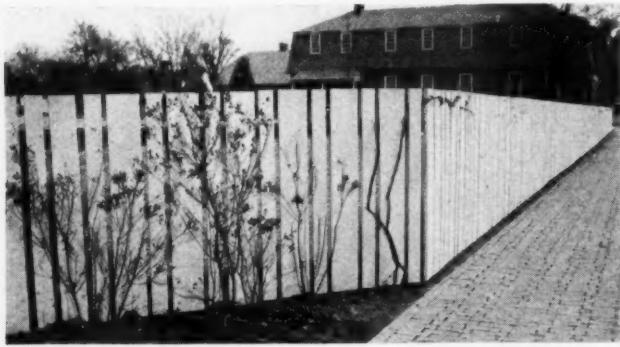
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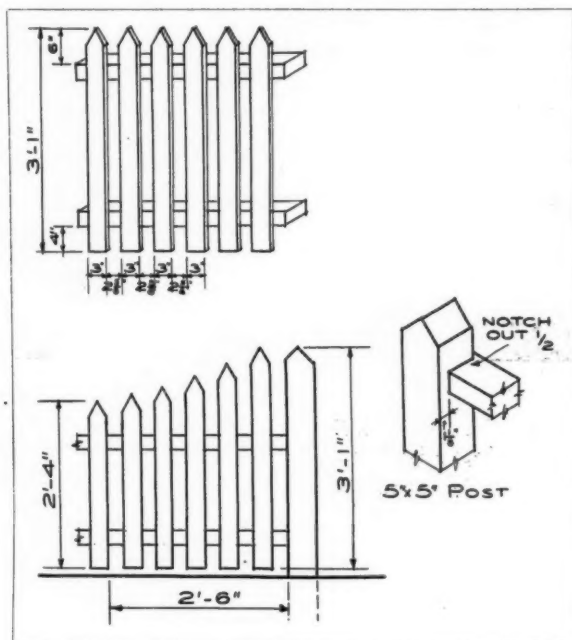
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## Parking Lot Beautified at Colonial Williamsburg

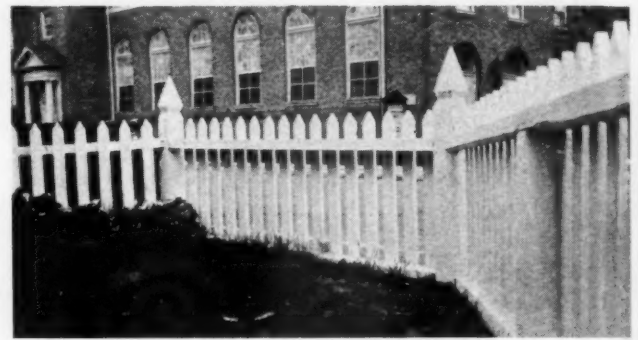
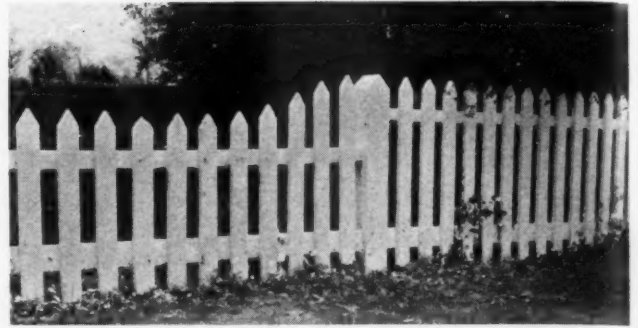
THE Colonial founders of Williamsburg, Va., probably didn't have to worry about automobile parking, but it is an important problem in this present motor age. In order to make the large public parking lot in the center of town as attractive as possible it was decided to enclose it with a 4' 6" board fence. Like most fences in Williamsburg, however, this could not be just an ordinary board fence but was specially designed for this



4' 6" FENCE around parking lot in Williamsburg is built of 4", 6" and 8" boards. It is protected on inside by substantial timber bumpers.



DETAILS of college gate picket fence at point where height changes from 2' 4" to 3' 1". Pickets are 3" wide, 1" thick and spaced 2 5/8" apart. Heavy stringers are bolted to 5" x 5" concrete posts in this Williamsburg parking lot fence. The boards are spaced 2" apart.

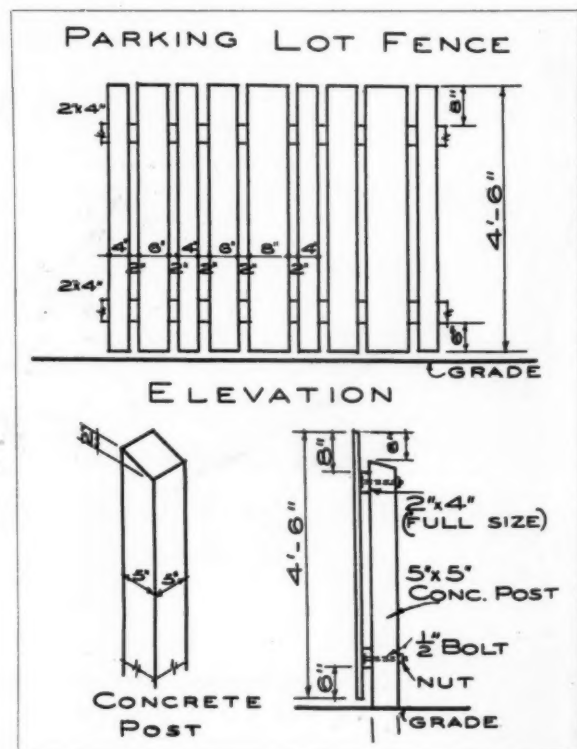


TWO VIEWS of Williamsburg picket fence near the college gate, showing substantial construction, good design.

purpose, and as the picture shows, turned out to be unusually attractive. The boards are 1" thick and are 4", 6" and 8" in width, spaced 2" apart. By alternating the different widths, a pattern is achieved that takes it out of the ordinary. The boards are nailed to 2 x 4's bolted to 5" x 5" concrete posts.

Inside the parking lot a substantial rustic timber bumper was built all around the yard to protect the fence.

The other Williamsburg fence illustrated below is the attractive whitewashed picket fence near the entrance to William & Mary College. The pickets in this fence are 3" wide, spaced 2 5/8" apart and vary in height from 2'-4" to 3'-1".





★

# Get NEW Beauty —with



CLEVER home-designers and builders know that one well-handled *detail* will often sell a house more quickly than dozens of "standard features".

That's why so many designers now put a paneled room or two into even their smallest homes — rooms richly paneled with Mengel Bord, the big, (48"x96") *hardwood* panels with faces of Mahogany, Gum, Walnut,

Birch or Oak! The paneling sells the house!

*Yes, and this clever designing doesn't cost them anything extra, either — the installed cost of the Mengel Bord is often less than that of lath, plaster and paint or paper!*

Let us send you full details about Mengel Bord, the 1/4", hot-plate, resin-bonded plywood with the grain running the long way! Use the coupon below!

## MENGEL FLUSH DOORS



as shown in the photo above, are lighter, stronger, *more economical* than any other flush doors on the market! And are backed by an unprecedented guarantee! If you think flush doors are "too expensive", use the coupon at the right!

The Mengel Co., Incorporated  
1124 Dumesnil Street  
Louisville, Ky.

Gentlemen: Please send me, at once, full information about Mengel Bord. ☐ Also about Mengel Flush Doors ☐.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

## "Western Pines\* Log Cabin Siding can't be beat for summer homes"

**says Builder Wm. Jasch,  
Michigan City, Indiana**



"You ought to see how folks visiting Michiana Shores go for summer homes built with Log Cabin Siding and interior Knotty paneling of Western Pines. It's easy to understand—these cottages are mighty good-looking, last for years, and don't need any upkeep. And I like to build them because it's a quick and easy job. You can't go wrong when you build vacation cabins with Western Pines, whether it's on order or on speculation."

*Write Western Pine Association for  
free book—"Vacation Cabins"*

WESTERN PINE ASSOCIATION YEON BUILDING  
PORTLAND, OREGON

\*Idaho White Pine      \*Sugar Pine  
\*Ponderosa Pine

**\*THESE ARE THE WESTERN PINES**

## ON & OFF the RECORD

Views and Comments

*by Structor*

**"MATURE" UNIONS?**—We often hear that many of the present policies of labor, which many consider short-sighted, such as restrictions on output, interference with efficient operation and refusal to cooperate in use of methods or materials that will reduce costs, are merely due to the fact that labor unions are "young and inexperienced." People who talk this way say that when they become more "mature" they will have more sense. They sometimes cite the railroads as an example where, because the unions are older, there are fewer strikes.

This argument is wholly unsound. There is no possibility of "appeasing" union officials as long as they run the unions for the sole purpose of getting more members and more dues, regardless of the welfare of their industry. There have been few strikes on the railroads because the unions have been getting everything they want, and the result has been a freezing of inefficiencies. Railroad operators' hands are tied. For example, in an area where there has been a decline in traffic they are still forced to keep the former full crews in operation regardless of the lessened need for such labor. The disheartening part about it is that some of the "mature" unions led by responsible, constructive-minded men have been attacked by the less scrupulous, more radical unions. They have been accused of "selling out" to management. The result has been that even the more reasonable union leaders have been bludgeoned into radical, short-sighted actions.

If this same system of inefficiency due to short-sighted labor tactics ever gets firmly fixed on home building, there simply won't be any home building. Unless, of course, the government does it; and there is some indication that perhaps that is what many labor leaders want. They think that if the government owned the railroads or the building industry or the coal mines, labor could get everything it asked for. That might be true for a while, but before long the government would be telling them what to do, as well as running industry and everybody else.

**STILL YOUNG AFTER 227 YEARS**—I have often thought that builders don't lay enough stress on the fact that houses last, not 20, 30 or 50 years, but hundreds of years, and with reasonable care are still worth a good price. From New England this thought has been given emphasis by Arthur Clifford of The A. W. Burritt Company, prominent Bridgeport, Conn., material dealers. Clifford points out that their firm advertises that houses can be and are used satisfactorily for two or three centuries, and they take every opportunity to call attention to New England's famous old homes, many of which have stood the test of time and are still good looking, livable and valuable. Illustrating this point is the accompanying Curtis homestead at Stratford, which is 227 years old and has just recently been purchased by Carle B. Robbins, up-and-coming editor of General Electric's "News Graphic" magazine. It's a fine, charming old house after all those years.

(Continued to page 98)



227-Year-Old Curtis Homestead, Stratford, Conn.



# A Timely Tip to BUILDERS

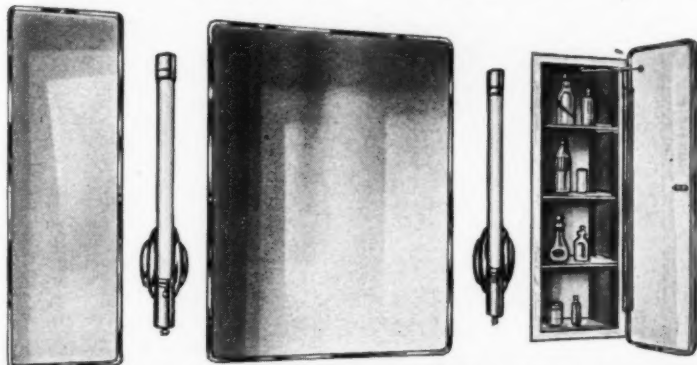
## from the FINAL AUTHORITY—the Woman

No doubt about it, many fine bathrooms are under-equipped when it comes to the cabinet—wholly inadequate in cabinet storage space for the needs of the family, as so many owners of new homes testify. You can eliminate this frequent

cause of customer disappointment by installing, for your better bathrooms, a complete MIAMI CABINET ENSEMBLE, including towel supply cabinet, and extra recessed shelves for the bathroom supplies.

### A Woman Writes—

"I would gladly have paid the extra cost of a complete MIAMI CABINET ENSEMBLE IN MY BATHROOM"



Fixtures are wired at the factory and are complete with bulbs.

Chrome framed, mirror unit flanked by two fluorescent light brackets and two side cabinets. Chrome-framed, mirror-lined, recess shelf below center mirror.

The Master's Ensemble.



For the modest bathroom, MIAMI offers the widest selection—over 140 models. You'll find in the MIAMI Line a cabinet or ensemble that is correct in cost and equipment for every bathroom in every type of home—for the needs of every family.

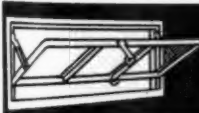
Let MIAMI service assist you in planning bathrooms of distinction for your houses. Ask your supplier for a MIAMI Catalog or write Dept. AB.



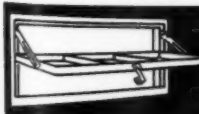
MIAMI CABINET DIVISION • The PHILIP CAREY COMPANY, Middletown, Ohio.



Normal indirect ventilation provided by simply unlocking and pulling forward.



Any degree of ventilation may be obtained by slight downward pull on ventilator.



Ventilator is perfectly balanced and always works easily.



Window opens from either top or bottom. Ventilator may also be quickly and easily removed.

Heavy double channel, pressed steel frame. All welded construction. Furnished for either putty or puttyless glazing.

DO YOURSELF  
THIS FAVOR:

Try VENTO-CHAMPION basement windows on your next job and discover, as thousands of builders have, what a whale of a lot of selling help they'll give you without adding one penny to costs.

The interest in more livable basements is exceptionally keen today, and the basement window has become important. Folks enthuse over the versatility of the CHAMPION'S two-way operation, the perfect ventilation it affords, its exceptional ease of operation, its practical puttyless glazing, its weather-tightness and obvious quality construction. And that's the kind of impression that helps to get the signature on the dotted line.

Try VENTO-CHAMPIONS on your next job and we'll wager you will always use them. See your dealer or write for complete details.

VENTO manufactures a complete line of windows for every type of building—all top-notch items—backed by a firm with an enviable reputation for dealer cooperation.

VENTO STEEL PRODUCTS CO., Muskegon, Mich.

# Zinclad NAILS

ARE "ARMORED"

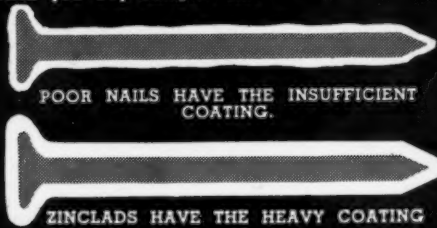
Too!



AND THIS  
HEAVIER ZINC  
COATING

DETERMINES THE VITAL DIFFERENCE BETWEEN  
ZINC DIPPED AND INSUFFICIENTLY COATED NAILS

Exaggerated comparison illustrating the reason we say — "Look to the thickness of the zinc coating when you buy shingle nails"



The Maze Zinclading process—distinctly different from galvanizing—provides Maze Zinclad Wood Shingle Nails with an "armor of zinc"—protection against rust. True, other shingle nails may have a zinc coating—but often an insufficiently coated nail carries from 50% to 100% less protective zinc than does a Maze Zinclad Nail.

The enlarged photographs above compare cross sections of a Maze Zinclad and an insufficiently coated nail. It is this heavier coating of

protective zinc that often enables Maze Zinclads to double the life of a cedar shingle roof. Yet, they cost only 9c more per square. At such a small extra cost, then, is it worth the risk to use any nail other than Maze Zinclads?

## THE MAZE LINE IS COMPLETE

Maze Nails are available for wood, asbestos, and asphalt shingles, metal roofing, cribbing, wood siding, etc. There's a better Maze Nail for every purpose. Write today for literature.

W. H. MAZE COMPANY • PERU, ILLINOIS



## On & Off the Record

(Continued from page 96)

**WIND POWER ON GRANDPA'S KNOB**—Elsewhere in this issue we describe the solar water heaters used in Florida homes to provide ample hot water from Old Sol. Now comes word of a giant wind turbine constructed on Grandpa's Knob in the Green Mountains of Vermont, which utilizes wind power to produce electricity. The engineers claim that the constant supply of wind in this mountain area will produce a satisfactory amount of electric current. Not a bad gadget to have around the house.

A visionary (?) friend of ours remarked the other day that the sun's heat could be used to generate refrigeration as well as to heat water, as they do in Florida. The same principle as the gas-operated icebox could be employed. He visualized huge central sun-powered cooling plants to provide refrigeration for all the homes in the South as a possible post-war industry.

**PRIORITIES AND BUILDING**—Defense spending at the colossal rate of a billion dollars a month superimposed on American industry is beginning to tax its productive capacity. Priorities in many basic materials are fully expected in the near future. And this will have an effect on all industries not directly essential to national defense. Automobile manufacturers have already accepted a 20 per cent cut, and more will come later. Already they admit they have been forced to substitute items in which there is a shortage. Similarly, many people fear the effect of priorities on residential building.

Informed opinion is that housing is a necessary part of defense and should be encouraged. Every new house means one additional living quarter somewhere along the line. When Mr. "X," a successful young executive, moves into his new \$8,000 house, Mr. "Y," a white collar worker, moves into the one he vacated. Then "Z," a defense worker who has just landed a new job in an airplane plant, may move into "Y's" old house.

Even so, shortages of basic materials may force considerable substitution in home building. There is no likely shortage of cement and masonry products for workers. The smart thing to do right now is to start studying what construction changes may be necessary now to keep shortages from tying up the job.

**BANNED FOR POOR DESIGN**—Residents of Palm Beach, Fla., are militantly proud of the high plane of their local architecture and, through a city art commission, pass on the design of all structures built. This has recently put to a test the question as to whether such a commission or jury can actually stop the construction of a building because of disapproval of its looks. Well, the Palm Beach Art Jury of five architects and the building inspector have won out on the first round, as the accompanying

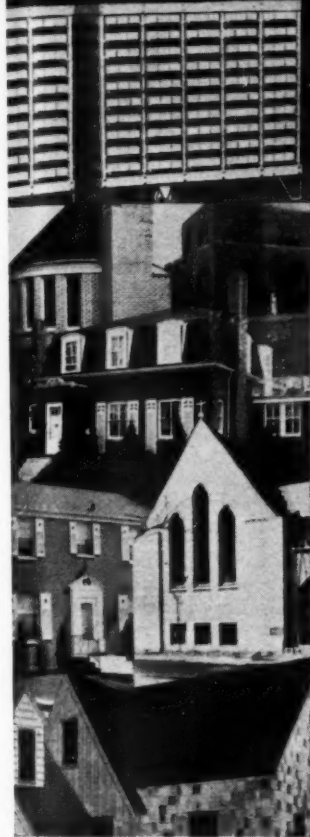
(Continued to page 100)



BANNED.



# SPEED UP DEFENSE BUILDING with this MACHINE



Make your own masonry materials WHEN AND WHERE YOU WANT THEM and deliver direct to job. You use local raw materials and common labor.

Automatic flexible production assures lowest cost. Multiple size units offer structural improvements and short-cuts in construction time.

Present DUNBRIK Manufacturers are now making this material in wide range of sizes and colors and directly supplying defense work as well as private building.

Help speed up defense construction and at the same time develop a paying business. Investigate this opportunity for your territory. Write today for free book. It tells the complete story.

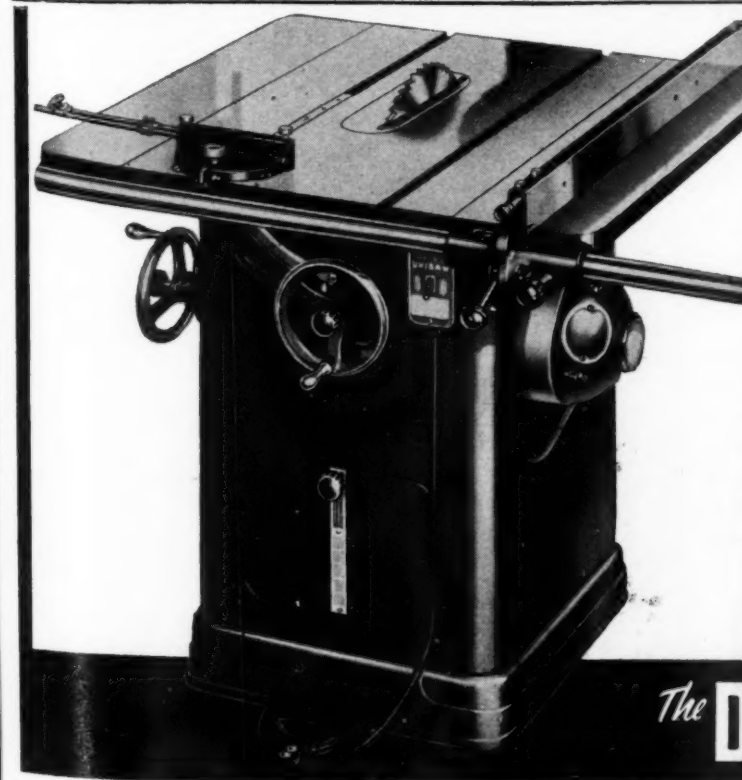
## W. E. DUNN MFG. CO.

450 W. 24th ST.

HOLLAND, MICH.



# You Can Save Money



## WITH THIS DELTA 10" TILTING-ARBOR SAW

Builders all over the country say this new Delta Tilting Arbor Saw gives them a real edge over competition. This remarkable low-cost tool can be taken right out on the job—or used in your shop—on special mill work—to cut labor costs and save time—to enable you to make extra profits on every contract. Don't judge its quality by its amazing low price. This saw is a sturdy, efficient tool with many features not found on tools costing three times as much. Get the full details right away.

### Send for NEW CATALOG of Low-Cost Power Tools

It gives prices and descriptions on the full line of Delta band saws, circular saws, sanders, jointers, shapers, mortisers, and scroll saws. Tells you how to take advantage of low-cost power tools to increase your profits.

Delta Mfg. Co. (Industrial Division)  
674 E. Vienna Ave., Milwaukee, Wis.

Gentlemen: Please send me the new 1941 Delta Catalog giving full details on the Delta Tilting Arbor Saw and other Delta low-cost tools.

Name .....  
Address .....  
City ..... State .....

The **DELTA** MANUFACTURING CO.  
INDUSTRIAL DIVISION  
674 E. VIENNA AVE.  
MILWAUKEE, WISCONSIN



**STANLEY**  
TRADE MARK

**"IF YOU  
WANT A  
SMOOTH  
RUNNING  
BRACE  
-THIS  
IS IT!"**

● There's a comfortable "feel" about this Stanley Bit Brace you'll note the minute you pick it up. Balance is just right for easy, straight driving. Other quality features include the cocobolo head and handle, the extra heavy steel bow and the strong, sturdy box ratchet. Forged steel Universal jaws hold straight shank bits from  $\frac{1}{8}$ " to  $\frac{1}{2}$ ", taper shanks up to Clark's No. 2 expansive bit. Ask to see the No. 923 Bit Brace at your dealer's. Write for free Stanley Tool Catalog 34.



#### Other Quality Features!

Head turns on ball bearings and a bronze bushing for easier action and longer life.

Threaded handle collars are swaged to bow—they can't work loose.

Nut and cotter pin lock entire chuck in place. Universal jaws are designed so they will not bend, jam, slip or come out.

**STANLEY TOOLS**

DIVISION OF THE STANLEY WORKS

NEW BRITAIN, CONN., U. S. A.

## On & Off the Record

(Continued from page 98)

picture shows. The Art Jury disapproved of the design and stopped its construction. The owner has taken the matter to court and, disgusted, offered the property for sale. In the meantime, it presents a dismal aspect on Palm Beach's spic and span Ocean Boulevard.

**BOMBED BRITISH MORTGAGES**—Many builders have been wondering what has been happening to British homes and to the mortgages on them. Thus far the damage, percentage-wise, has been small. One large British Building Society having mortgages on 300,000 properties reported that only 480 have been destroyed, 2,000 badly damaged, and 7,000 slightly damaged. Another building society with 15,000 mortgages reported only 87 seriously damaged or destroyed. In England, Scotland and Wales a few large building societies have mortgages on some 1,500,000 properties. They report that mortgage payments have been holding up surprisingly well. Fifty per cent of borrowers called into military service have been keeping up their payments in full, and most of the others have been maintaining interest payments. Steps are being taken in the British Parliament to have the government share in bombing losses on homes on an insurance basis so that the burden will not fall too heavily on individual home owners.

**"MONUMENTALISM" IN ARCHITECTURE**—The TNEC "Monopoly" Committee in its recent report on housing blames part of the high cost of housing on architects "who have paid too little attention to the influence of design on cost." This may be due, the Committee says, to the type of architectural training "patterned after the Beaux Arts system, which lays greater stress on monumentalism than on economy." The Committee adds, "Whatever progress has come about has been chiefly the result of commercial developments by materials producers." I've known there was something peculiar about a good many architects, but never put it quite in this TNEC way!

**AMERICAN EFFICIENCY THREATENED?**—American industry has been justly world famous for its efficiency, and during the entire history of the country there has been a constant decline in unit labor costs. In other words, through constantly developing more efficient methods, the cost of all kinds of products has been brought constantly lower. This includes the multitude of items that go to make up a modern home. This constant lowering of unit costs has been responsible for the wide distribution of goods and services in this country and its high standard of living. But now this process appears to be coming to a halt. Recent figures show that unit labor costs for the first time in history have begun to mount. Labor inefficiency is now destroying the advantage of machine and managerial productivity.

For the first time, organized labor has such great power, coupled with little responsibility, that it is becoming difficult for American machine efficiency to operate. Informed economists say that once the automobile industry is fully under the thumb of union dictators, it will rapidly lose the high efficiency for which it has been justly famous. Unless union leaders change.

The irony of it is that the unions themselves will suffer most, for as the productivity of industry is reduced and costs rise, their



**SLUMP BRICK** of concrete is used by builder Patrick McCarl in Miami Beach to give rough textured wall. Bricks are 8" x 12" x 2 1/4".



standard of living is automatically lowered. Unless labor union leaders will cooperate with industrialists to produce more goods at still lower costs, rather than to obstruct production, the entire American economy will suffer.

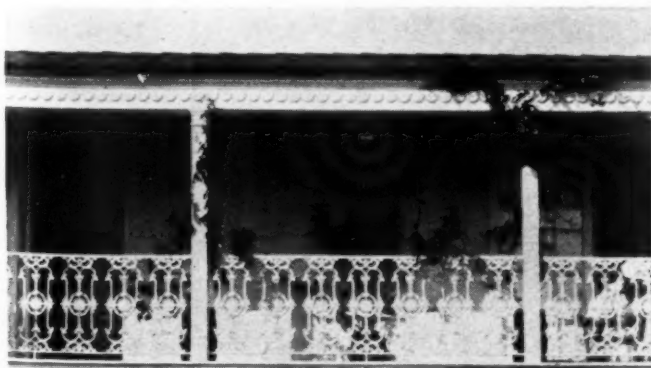
**NICE NAMES**—The new additions to Hugh Potter's River Oaks development in Houston have some fine eye- and ear-catching names. There's Willowick Road, for example, and Inverness Drive, also Timber Lane, Del Monte Drive, and Knollwood Drive. Some of the other street names include Inwood Drive, Chevy Chase Drive, Olympia Drive, San Felipe Road.

Incidentally, Potter has done an unusual thing in his new Sections 10 and 11 by putting on a pre-development sale of homesites. Purchasers are offered sites in advance of development at a down payment of from 10 to 25 per cent, with no interest or taxes until 1942.

**POST WAR PLANNING**—There's lots of talk these days about planning for the post war era. It sounds a little previous with the war situation as it is; but still we must admit that considerable advance planning will be necessary to prevent such serious aftermaths as occurred following the last war. Home building and modernizing should play a tremendously important part in any post war program. New Deal planners talk as though the government will do all this. God forbid. It's up to building men interested in preserving the private enterprise system to work out a program for rehousing and rebuilding after the war.

A significant step in this direction has just been taken by the New York State Legislature in passing the Urban Redevelopment Corporation's Act. Under this Act, blighted and neglected sections of cities can be rebuilt by limited dividend corporations. When 51 per cent of the property owners in a section agree on a reconstruction plan and have the approval of the city planning commission they can form a corporation and compel the remaining property owners to cooperate in the proposed plan by exercising the right of eminent domain. By group action of this kind it may be possible to rebuild vast sections of our cities without government subsidy.

(Continued to page 102)



IRONWORK AND SHUTTERS give charm to Palm Beach work of Arnold Cousin Co., leading builders.

## ALL OVER THE COUNTRY

IT'S

MAN WANTED to surface floors on contractor basis. Old floors as well as new must be sanded immediately. No previous experience required. Only specifications are that man have latest high-speed American sander.

MAN WANTED to surface floors on contractor basis. Old floors as well as new must be sanded immediately. No previous experience required. Only specifications are that man have latest high-speed American sander.

# You Too— can make BIG MONEY with an American Floor Sander

Ads for men to do floor surfacing work are becoming more and more prominent all over the country due to the greatly increased demand for floor surfacing work on large housing construction programs.

You can go into business for yourself surfacing old floors as well as new in residences, office buildings, schools, etc., and besides you can do a nice business as a sub-contractor with American high-speed floor sanders.

This latest modern American equipment is built to bring you more dollars per hour. No experience is required and after a few hours you can run one like an "old-timer."

Get into this business for yourself and be your own boss. Send in the coupon below for complete details, beautifully colored circular and price absolutely free without cost or obligation to you.



**THE AMERICAN**  
FLOOR SURFACING MACHINE COMPANY  
511 So. St. Clair Street • Toledo, Ohio

Gentlemen:

☐ Send me complete details and prices on American floor sanders and tell me how I can get into this well-paying business for myself.

☐ I already own a floor sander. Kind.....

Years old..... Please quote trade in on this.

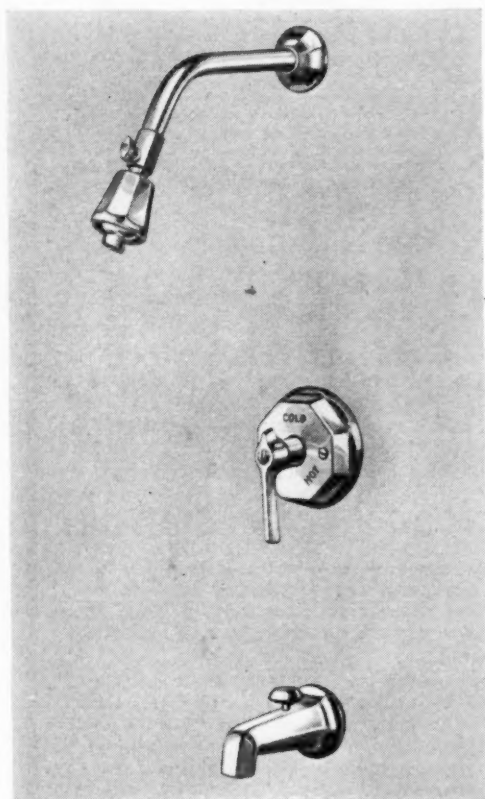
Name.....

Street.....

City..... State.....

# It's New! None other like it!

## Priced same as ordinary 2-valve shower!



**1 MIX WATER FOR BATH OR SHOWER  
BY TURNING ONLY ONE VALVE.**

**2 WATER ALWAYS COMES FROM SPOUT  
FIRST. RAISING KNOB DIRECTS STREAM  
TO SHOWER. NO UNEXPECTED WETTINGS.**

The new Triton shower fitting is automatic, simple in operation, designed for efficiency and *priced low*.

A single handle mixes water quickly to desired temperature. When the knob on spout is raised, water is diverted to the shower head. When water is shut off, the knob drops back to original position—ready for next user. . . . Another Kohler "First"!

Get all the facts, now, about *this* and other new Kohler fixtures and fittings. . . . Kohler Co. Founded 1873. Kohler, Wisconsin.

# KOHLER OF KOHLER

PLANNED PLUMBING AND HEATING

## On & Off the Record

(Continued from page 101)

**PLASTICS AND PREFABRICATION**—Defense housing is undoubtedly giving a great impetus to new building methods, materials and processes. The prefabricators are getting a golden opportunity to experiment with ample government orders to finance the experiments. Crackpot ideas will undoubtedly come out of it, but some sound, lasting discoveries may be made. One intriguing line of thought is that someone will develop a new exterior wall material combining wood fibre with plastics in a way that would give a strong, firesafe insulating product that could be molded in large panels. Such a product would give considerable impetus to the panel-built methods now undergoing considerable development.

**SENATOR NORRIS DISAPPOINTED**—In effect, all that William Green, president of the A. F. of L., said in reply to Senator Norris' letter complaining about high union fees at cantonments was that "we have always done it." He may have thought it a satisfactory answer, but Senator Norris and most of the American public did not. Of course, they "have always done it," and the only difference now is that the unions have become powerful enough to make it pinch the public so that they realize what is happening. Green's reply to this and other charges against local unions is that he has no power to interfere with local affairs. But when it comes to demanding something from the public, or some favorable legislation, the "head man" always speaks for the local unions. Some time soon the American public is going to insist that a monopolistic union organization which has powers approaching that of a branch of government must assume responsibility as well as power. It must also assume responsibility for the welfare of the industry the workers serve, rather than be operated solely to get more members and more dues, regardless of the public interest.

**HOW HOME PRICES VARY**—People are greatly confused by the fact that a house can be built in Florida or Texas for much less than in Illinois or New York state. Interesting light on the different price levels that prevail in different states is given by recently released FHA mortgage figures. The average FHA mortgage in Texas, for example, was \$3,836. In Illinois it was \$5,523, and in New York \$5,114. However, the average FHA mortgage in Florida was only \$3,820 and in Tennessee \$3,720. In Pennsylvania the average was \$4,844, in Michigan \$4,623, and New Jersey \$4,889. In Missouri it was \$4,392. FHA mortgages are a good index of building costs. FHA placed 162,333 mortgages on new homes in 1940; the average amount was \$4,450. Leading states were as follows: California, 30,943; Michigan, 14,625; Texas, 10,636; New York, 10,107; Pennsylvania, 8,032; Illinois, 7,499; New Jersey, 6,885; Ohio, 6,325; Indiana, 5,712; Florida, 5,442.

The high number of FHA mortgages placed in California, Texas and Florida tend to reduce the national average.

**MORE HOUSE FOR YOUR MONEY**—*American Builder's* campaign to show that you get "More House for Your Money Today" has been so successful that even government officials are admitting it. In a recent press release, Donald H. McNeal, appraisal expert of the HOLC, said, "In comfort, convenience and all-round 'livability' the buyer of the 1941 home gets at least 25 per cent more in value than his older brother could obtain back in 1926."

McNeal said that home builders have made more progress in the past 15 years than any like period in history, and mentioned automatic heating, fire resistant materials, weatherstripping, waterproofing, insulation and the use of such new products as plywood, plastics, glass brick, gypsum, quick-drying paints and acid-resisting glazes.

**KNOW YOUR LOCAL MARKET**—One way to insure the success of a new housing development is to make a thorough study of the local market. The recent Census can be of help to builders in this respect. Studies have been made by the U. S. Census Bureau of every city and town and its surrounding suburbs and an exact count of the houses and vacancies in that area made. Such data may be obtained direct from the Bureau of the Census at Washington, D. C., merely by asking for it.



## REVIEW of the NEWS

Statistics, Associations, Agencies

### A FEW CORRECTIONS

In the Classified Directory and Buyers' Guide which appeared in the April *American Builder*, the address of the F. H. Lawson Company under "CABINETS—BATHROOM" should have been given as Cincinnati, Ohio, instead of Dubuque, Iowa.

The address of the Delta Mfg. Co. under "JOINTERS—WOODWORKING, MACHINES—SANDPAPERING and—SHAPING, MACHINERY—BANDSAW, SAWS—BAND and—CIRCULAR, and WOODWORKERS—COMBINATION" should have been given as Milwaukee, Wis., instead of Chicago.

The trade names "Flexachrome" and "Tile-Tex," identifying products of the Tile-Tex Company, Chicago Heights, Ill., were omitted from the Trade Name Index which appeared in the same issue.

### New Amendments to the National Housing Act

THE CREATION of a \$10,000,000 Defense Housing Insurance Fund to be used under the direction of the Federal Housing Administrator is the most recent in the series of current legislation affecting the defense housing program.

Designed to add a Title VI to the National Housing Act, the law confers additional authority for the insurance of mortgages on 1- to 4-family properties in areas in which the President shall find "that an acute shortage of housing exists or impends which would impede national defense activities." The aggregate amount of principal obligations of mortgages insured under this new Title is limited to \$100,000,000 and no mortgage can be insured under it after July 1, 1942, except for commitments made prior to that date or unless, by presidential proclamation, the emergency is ended before that time.

The bill, signed by the President on March 28, requires that a mortgage must be approved for mortgage insurance or defense housing insurance prior to the beginning of construction but the bill also covers any property on which construction was begun after January 1, 1940, and which has not been sold or occupied since completion. To be eligible, the mortgage cannot exceed \$4,000 if the dwelling is designed for a single-family residence; \$6,000 if designed for a 2-family residence; \$8,000 for a 3-family residence; or \$10,500 for a 4-family residence.

Maturities for mortgages insured under this Title must be satisfactory to the Federal Housing Administrator but may not exceed 20 years from the date of insurance and bear interest (exclusive of premium charges for insurance) not to exceed 5 per cent per annum on the amount of principal outstanding at any time. Premium charges may not be less than one-half of 1 per cent nor more than 1½ per cent per year.

An important variation from the provisions of the present FHA insurance program under Section 203 is the fact that the new title does not include a requirement that the mortgagor be the owner and occupant of the property at the time of insurance nor does it require that the mortgagor shall have made the 10 per cent down payment required. This change makes it possible for the new 90 per cent insured loan to be made to operative builders as well as to be made on properties intended to be rented rather than sold.

### Clausen New Vita-Var Manager

VINCENT Clausen has been appointed Merchandising Manager of The Vita-Var Corporation, Paint Manufacturers, Newark, N.J. He has had a long record of service in the paint field, having been Director of Advertising and Merchandising for Devoe & Reynolds Co., Inc., also President of the Ajax Advertising Agency, Vice President in charge of merchandising, E. T. Howard Co. (N.Y. Advertising Agency) and Account Executive with McCann-Erickson and Geyer, Cornell & Newell (N.Y. Advertising Agencies).



**Faster, Cleaner,  
Easier Sawing...**

because

**11% MORE  
Cutting  
Power**



Speedmatic uses Helical Gears... the most modern form of Straight-Line Drive. Cuts down friction resistance; minimizes power loss and gear wear.

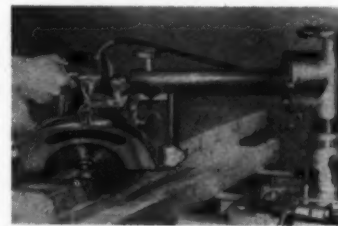
## Speedmatic

Let Speedmatic show you the way to hour-after-hour of high-speed, reliable, economical sawing—through the higher efficiency of Speedmatic helical gear drive. Delivers to the cutting blade 11% more of its motor power than other drives. Power-to-spares that holds up under the toughest going... that avoids overloading and stalling.

Now prove to yourself what Speedmatic will do for you. Besides its greater power, try its scientific balance... its easy one-hand operation. See your local Porter-Cable man. He will gladly demonstrate—no obligation (name in phone book).

### With Radial Arm You Get Two Saws in One

Quick attachment to the Porter-Cable easy-slide, non-sag, ball bearing Radial Arm converts your Speedmatic into an efficient bench saw. A big time saver on duplicate cutting. Set it up in any part of the lot, building, or workshop.



**PORTER-CABLE MACHINE CO.**  
1721-5 N. Salina St. Syracuse, N. Y.  
Representatives in Principal Cities in U. S. A.



Here's a way to have electric outlets all around the room—concealed, yet on the surface—at your finger tips. An adequate number of outlets for all times—for any situation. Move furniture or appliances to suit your taste—not necessarily where outlets are placed.

There are also packages of "Plug-in" Strip in five combinations available for a quick installation of outlets along any wall. A complete packaged assembly—merely clips to the baseboard as a neat trim.

\*Perhaps this is too many for a small room. The outlets are on six inch centers, but "Plug-in" Strip is also made in 18 or 36 inch spacing. A blank raceway called "Fill-in" Strip may also be used for inaccessible places.

WRITE FOR DETAILS



**National Electric**  
PRODUCTS CORPORATION  
SIXTH STREET PITTSBURGH, PA.

## Producers' Council Announces Program

**PUBLIC** and private building opportunities during and after the present war emergency and the prospective demand for construction materials will be discussed by leading American production experts at the eighteenth annual meeting of the Producers Council to be held this year both in Chicago and in the Yosemite Valley, California.

After meeting in Chicago from May 7 to 9, the Council will reassemble in the Yosemite Valley on May 17 in conjunction with the seventy-third national convention of the American Institute of Architects, with which it is affiliated. At Yosemite, the role of the architect and the building industry in defense will be the theme of a three-day program, following which the joint convention will move to Los Angeles for the final banquet of the 1941 meeting.

Men prominent in federal and civilian ranks of production management will take part in the Chicago sessions of the Council, which will be held at the Stevens Hotel. A symposium on "The Prospect for Construction and Demand for Building Products" will open the program at 10:30 a.m., May 7. Albert B. Tibbets, sales production manager of the National Lead Company, New York City, and president of the Producers Council, will preside.

Speakers and their topics will include: Robinson Newcomb of the Research and Statistics Bureau of the Office of Production Management, "Probable Demand for Defense Construction"; Ernest M. Fisher, director of Research in Mortgage and Real Estate Finance for the American Bankers Association, New York City, "Maintaining Private Residential Building for Defense Housing and Community Needs"; D. H. Davenport, of the Bureau of Labor Statistics, "Supply and Demand for Building Labor"; H. E. Foreman, of the Associated General Contractors of America, "Public Works Policies During and After the Emergency."

Thomas S. Holden, of the F. W. Dodge Corp., will be the speaker at a building industry luncheon at 12:30 p.m. His subject will be "Present and Future Problems of the Building Industry."

Central and South American trade will be the subject of a public discussion led by John Abbink of the Business Publishers International Corp. and F. J. Plimpton of Vermont Marble Co. at 2:30 p.m. Abbink will speak on "Economic Factors in Latin American Trade" and Plimpton on "Members' Interest in Latin American Trade." A second symposium will be held at 3:30 p.m. on "The Market for Members' Building Products in the Residential Field."

Outstanding men from the field of residential building who will address the symposium include Sumner D. Hersey, large scale operative builder in East Natick, Mass.; Clifford W. Stuart, manager of the General Electric Home Bureau, Bridgeport, Conn.; Howard Potter, head of the Potter Lumber and Supply Company, Worthington, Ohio; and Bernard L. Johnson, editor *American Builder*, reporting on the work of the National Homes Foundation.

A dinner meeting will be held at 6:30 p.m. Thursday morning, May 8, will be devoted to a presentation of the expanded program for the Council's twenty-one clubs in the principal marketing centers of the country. The delegates will hear addresses from Gordon C. Hay, sales promotion manager of the Fiat Metal Manufacturing Co., Chicago; Frank A. Sansom of the International Nickel Company, New York City; R. J. Willetts, past president of the National Employment Board; H. F. Wardwell, vice president of the Detroit Steel Products Co., Detroit; Theodore Irving Coe, technical secretary of the American Institute of Architects, and H. H. Simmons, director of advertising of Crane Company, Chicago.

The annual business meeting will begin at 2 p.m., Thursday, with reports from J. W. Follin, managing director of the Council, and Mr. Tibbets.

Council efforts to promote co-operation with industry will be reviewed by F. Stuart Fitzpatrick, of the United States Chamber of Commerce. Other reports will be given by J. C. Bebb, of the Otis Elevator Company, New York City; and F. W. Morse, vice president of the Chamberlain Metal Weather Strip Company, Detroit, Mich.

A joint dinner with the Producers Council Club of Chicago at 6:30 p.m., Thursday, and a meeting of Council Club delegates and member representatives at 10 a.m., Friday, will conclude the Chicago program. With the exception of a meeting on Sunday,



May 18, when defense plans will be discussed, the Council's sessions in Yosemite will be held together with the American Institute of Architects.

E. L. Saberson, vice president of the Masonite Corporation, Chicago, Ill., is chairman of the committee in charge of arrangements for the meeting. Other members are W. D. M. Allan, director of promotion for the Portland Cement Association, Chicago; A. T. Howe, Chicago representative of the Vermont Marble Company and president of the Producers Council Club of Chicago; and Mr. Hay.

Events on the West Coast will be arranged by a committee composed of W. R. Steyer, president of the Producers Council Club of Southern California; G. R. Kingsland, past president of the Producers Council Club of Northern California, and Mr. Follin.

## Annual Architects' Meeting

THE SEVENTY-THIRD annual convention of the American Institute of Architects will be held in the Yosemite Valley, California, May 17 to 19, it is announced by Edwin Bergstrom of Los Angeles, president of the Institute. Delegates from the Institute's seventy-one Chapters throughout the country, members of the Producers' Council, and representatives of schools of architecture will participate.

Problems of construction and design under the national defense program, particularly in the field of housing, will be discussed. Reports and addresses will deal with developments in architecture and building, including state and municipal works, federal public works, industrial relations, building costs, new materials, urban land use, city planning, national preparedness, foreign relations, registration laws, and education.

The report of the committee on building costs will be presented by the chairman, M. H. Furbringer of Memphis, Tenn. Mr. Bergstrom in his presidential address will discuss the position of the planning professions in building operations connected with national defense.

David Witmer of Los Angeles has been appointed chairman of the committee which is directing arrangements for the convention. Other members of the committee have been named as follows: Reginald D. Johnson, Carleton M. Winslow, David C. Allison, Harold Chambers, Gordon Kaufmann, Roland Coate, Palmer Sabin, Pierpont Davis, Paul R. Hunter, and William Schuchardt, all of Los Angeles, and Edgar Maybury of Pasadena.

Mr. Kaufmann is a member of the national Board of Directors of the Institute, representing the Sierra Nevada District, which comprises California, Arizona, Nevada, Hawaii, and other insular possessions in the Pacific. Pre-convention sessions at which Mr. Bergstrom will preside, are scheduled by the Board.

Co-operating in plans for the convention is the Southern California Chapter of the Institute, of which S. B. Marston of Pasadena is president, and the southern section of the State Association of California Architects. Trips to points of historical and scenic interest in southern and northern California are planned. On May 26, the Northern California Chapter of the Institute and the Northern Section of the State Association of California Architects will be hosts to the architects in San Francisco.

## Government Seeking Architects

ARCHITECTS are needed now for work in the national defense program. The United States Civil Service Commission has announced an examination for architect positions paying from \$2,000 to \$4,600 a year. Persons may qualify in design, specifications, or estimating, the duties of the positions being based upon these divisions of work.

To qualify as junior architect at \$2,000 a year, applicants must have completed a 4-year architectural college curriculum in either architecture or architectural engineering. For the other positions, completion of a 4-year college course in architecture or engineering is required, as well as appropriate professional architectural experience in the optional subject. Additional architectural or engineering experience may be substituted for the college study.

Applications must be filed at the Commission's Washington office not later than May 7, 1941. Further information and application forms may be obtained at any first- or second-class post office, or from the U. S. Civil Service Commission.

## A NUTONE CHIME

was chosen by the J. C. Nichols Companies  
for this Regency House in Kansas City



This Regency Home—at 1001 West 67th Terrace in Romanelli Gardens of the Country Club District, is a development of the J. C. Nichols Companies, in Kansas City, Mo.

For 35 years, the building department of the J. C. Nichols Companies has been building just the sort of homes Kansas Citizens saw in their dreams. Shown above is their Wish-maker Regency House, beautifully adapted to the Country Club District. And shown in the inset is the particular model of NuTone Door Chime installed in it. The charming and authentic *Mt. Vernon* which, like all NuTone Chimes, sounds two musical notes for the front door, one for the rear.



FRONT DOOR REAR DOOR

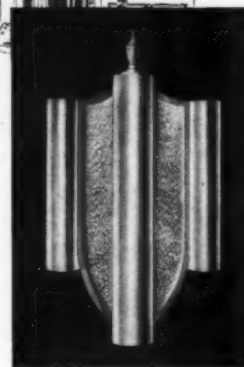
But the *Mt. Vernon* Door Chime is only one from the comprehensive NuTone line, all models of which are drawn on by J. C. Nichols for their houses. There is a NuTone for every type of home, and for any room within that home. Priced \$1.95 to \$29.50.

Correspondence from specifiers of materials and equipment for small homes is invited. Ask for catalog 4023M. (Prices and specifications are subject to change without notice.)

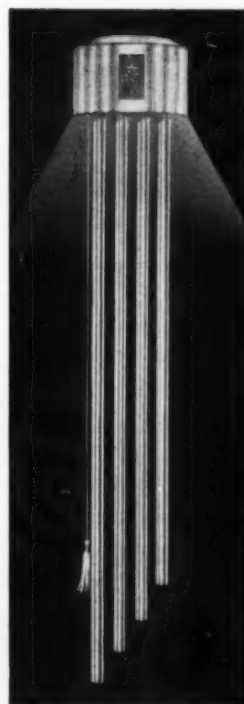
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**CHIMES-INC.**

CINCINNATI, OHIO

New York, 1150 Broadway; Chicago, Merchandise Mart; Los Angeles, 837 Traction Ave.; Seattle, Terminal Sales Bldg.; Toronto, Crown Bldg.



Installed in this home is the American Colonial NuTone Door Chime called *Mt. Vernon*. 3-tube effect of satin brass and hammered brass shield. 11 3/4" high. \$5.95



Another NuTone Chime that building companies frequently install is *Trinity* "4". Four long brass tubes sound 4 Cathedral tones for front door, one for rear. Interior light. Beautiful plastic cover. 50" high. \$19.95

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### New Officers of A.G.C.

**M.** W. WATSON, general contractor of Topeka, Kansas, and Dan W. Kimball, of Grand Rapids, Michigan, were elected president and vice-president, respectively, of the Associated General Contractors of America, Incorporated, at the 22nd annual convention held during the week of February 17, in Houston, Texas.

Watson was elevated to the presidency from the vice-president's chair held for the year 1940 in accordance with the tradition of the organization. He was previously chairman of the highway contractors division and a member of the advisory board and executive committee. His business is as an individual general contractor, largely in highway, bridge and major building construction. He operates in Texas, Kansas, Missouri, Nebraska and Colorado.

Kimball is president of the Owens-Ames-Kimball company of Grand Rapids, one of the principal general contracting firms of the mid-west. Among the firm's impressive list of major construction projects is the erecting of 864 buildings at Fort Custer, Battle Creek, in line with the Federal Defense program. Contracts for this job exceed seven million dollars.

### Building Officials' Annual

**B**UILDING Department heads from all parts of the United States and Canada will attend the 26th annual convention of the Building Officials Conference of America, Inc., in the Park-American Hotel, Kalamazoo, Michigan, May 19th to the 22nd inclusive.

The four day session will open Monday morning, May 19th at 10:30 with an address of welcome by Mayor Frank McAllister of Kalamazoo. Reports by Colonel John W. Oehmann, of Washington, D.C., president of the organization, and Arthur N. Rutherford, of Hartford, Conn., secretary-treasurer, will follow.

Highlights of the program will include: An address on "The Relationship of Architects and Building Departments," by architect L. C. Kingscott, of Kalamazoo, member of the Michigan State Bridge Commission; a talk on "Convalescent Homes—Their Uses and Control," by William D. Guion, building commissioner of Cleveland, Ohio; and a discussion on the subject, "If Our Cities Need Bomb Shelters," by Norman M. Stineman, of Chicago, editor of "Concrete." Andrew C. H. Leak, Inspector of Buildings of Kalamazoo, is chairman of the committee in charge of the convention.

### Home Bombing Loss Small

**W**AR damage to British homes financed by building societies has been relatively small, the Federal Home Loan Bank Review reports. Building societies in Britain are similar to savings and loan associations in this country.

Despite heavy bombing raids by German planes on a number of large cities, the damage to private homes has been far less than expected and steps are being taken in the British Parliament to have the Government share in the losses on an insurance basis so that these burdens will not fall too heavily on a few home owners. The Review's article is of interest both to the American public and to thrift and home-financing institutions because it shows how the British building societies have had to meet many new war problems not encountered in previous conflicts.

One large building society having mortgages on about 300,000 properties reported for 1940 that it had only 480 homes entirely destroyed, 2,000 badly damaged but repairable, and 7,000 slightly damaged. A smaller society holding 15,000 mortgages reported only 87 properties seriously damaged or destroyed. Another society stated that "usually, the damage suffered by private houses is slight; indeed, from preliminary returns it appears that total wrecks represent a very small proportion of the number of houses affected."

For the building societies as a group, the havoc seems to have been mitigated by the fact that most of them have their loans invested over a wide area of England, Scotland and Wales, the Review said. Thus, even the complete destruction of a single city would affect but a relatively small proportion of the total mortgages held by any one institution. British building societies as a whole have mortgages on about 1,500,000 properties at the present time.



## April Residential Building Maintains Lead Over Last Year; Total Construction Also Ahead

CONTINUING the increase shown in March 1941 as over a year earlier, the figures for the first half of April show that the residential building volume for the entire month should register an increase of at least 10 per cent over April 1940.

Statistics for the four classes of construction are as follows:

	Apr. 1-15, '41	Apr. 1-15, '40	March, 1941
37 Eastern States			
Residential .....	\$ 72,531,000	\$ 65,275,000	\$147,859,000
Non-residential .....	55,906,000	51,456,000	201,458,000
Public Works.....	26,567,000	28,580,000	84,592,000
Utilities .....	9,028,000	7,591,000	45,994,000
Total .....	\$164,032,000	\$152,902,000	\$479,903,000

## Over Half National Wealth Is Real Estate

THAT more than half of the national wealth of the United States is in land and buildings is perhaps the most striking conclusion brought out in a monumental study of residential real estate by David L. Wickens which has just been published by the National Bureau of Economic Research.

In 1900, Mr. Wickens says, all real property, residential and nonresidential, was valued at about \$52,500,000,000. By 1912 its value had more than doubled, reaching a total of \$109,200,000,000. By 1930, this aggregate value had more than tripled, reaching a total of \$314,200,000,000. Subsequent depression years brought about a sharp decrease to \$203,600 million in 1934; but even after this drop, the aggregate value stood at a level nearly four times as high as that of 1900.

"This rise in total value," Mr. Wickens says, "reflects not only more costly structures, enhanced ground rents and speculative values in urban centers, but also a larger number of structures as population expanded, particularly in towns and cities."

Between 1900 and 1912, Mr. Wickens says, this huge aggregate value represented close to 60 per cent of the total national wealth of the country. Between 1912 and 1922, while real property continued to mount rapidly in value, other forms of wealth grew more rapidly so that real property fell to about 55 per cent of the total. Since then land and buildings have continued to make up well over half of the total wealth.

## Housing Figures from U. S. Census

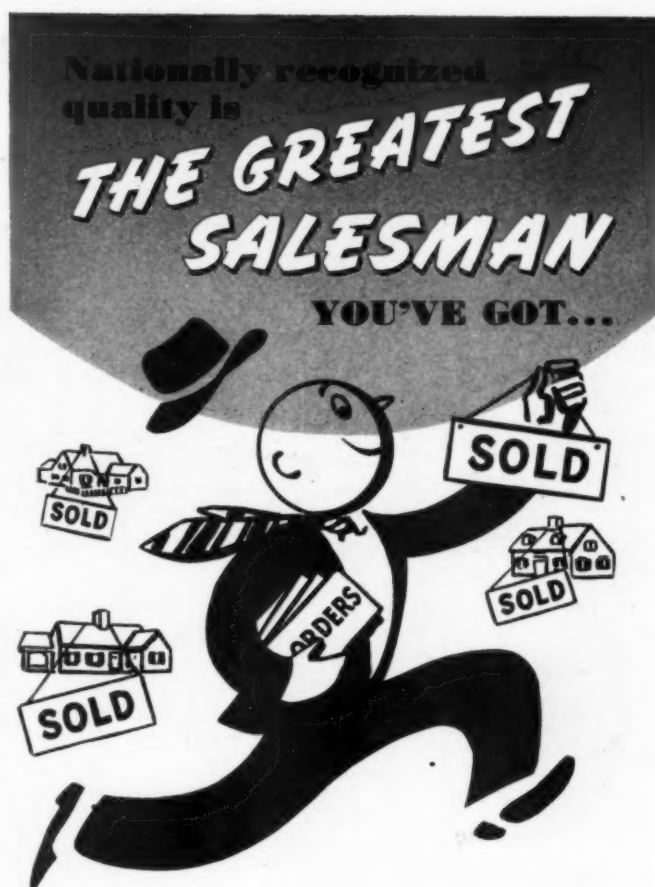
OF THE 37,336,890 dwelling units in the United States on April 1, 1940, 1,884,016, or 5.0 per cent, were vacant and for sale or rent, according to revised figures from the 1940 Census. Of the dwelling units which were vacant and on the market, slightly less than half were in urban places, where they represented 4.3 per cent of the whole number of dwelling units in urban places, while slightly more than half were in rural territory, where they represented 6.1 per cent of all dwelling units in rural territory. The dwelling units reported include both seasonal and ordinary units, and the larger percentage vacant in rural territory is explained in part by the large number of seasonal units in rural areas. Urban places are defined as incorporated places having 2,500 inhabitants or more.

By far the larger part of the dwelling units reported were occupied by households enumerated in the Census at their usual place of abode, such occupied units numbering 34,861,625 and forming 93.4 per cent of the total.

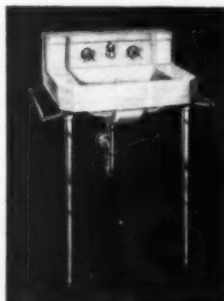
In addition to the vacant units which were for sale or rent, there were also reported 591,249 vacant units not for sale or rent, comprising mainly dwelling units held for households not living in them at the time of the census (perhaps largely summer residences and other seasonal units), together with a small number of units temporarily occupied by nonresident households.

A dwelling unit, as this term is used in the census, is the living quarters occupied by one family or household. In an apartment house there are, therefore, as many dwelling units as there are separate apartments. Consequently the number of occupied dwelling units represents approximately the number of private households in a given area and may be compared roughly with

(Continued to page 108)



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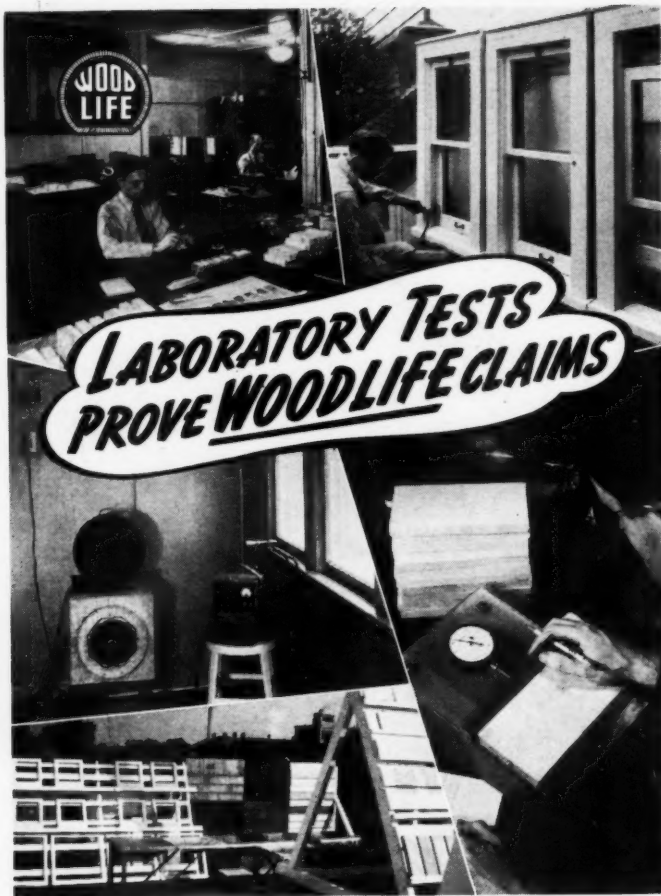
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## Review of the News

(Continued from page 107)

the number of private families shown in the Census Reports for 1930, which number, for the United States, was 29,904,663.

Such a comparison indicates that the number of private households increased approximately 16.6 per cent. This increase is more than twice the 7.2 per cent increase shown in the population of the United States between 1930 and 1940.

The average number of persons per occupied dwelling unit in the United States in 1940 was 3.8, as compared with an average population per private family of 4.1 in 1930. More than half of the increase in the number of families (or dwelling units) in the decade is thus due to a decline in the size of family and less than half to population increase. The average population per occupied dwelling unit in urban places in 1940 was 3.6, as compared with 4.0 in rural territory.

The housing data for the United States are summarized in the table.

Among the geographic divisions, those showing the highest vacancy ratios were the two in the far west, namely, the Mountain and Pacific, with 6.9 per cent and 6.5 per cent, respectively. Next were the New England and Middle Atlantic divisions, with 5.9 per cent and 5.8 per cent, respectively, while the divisions with the lowest vacancy ratio were the East North Central and the East South Central, with 3.7 per cent and 3.8 per cent, respectively.

### NUMBER OF DWELLING UNITS IN THE UNITED STATES: 1940

Item	Total	In urban places	In rural territory
<b>1940</b>			
All dwelling units.....	37,336,890	21,621,985	15,714,905
Occupied dwelling units.....	34,861,625	20,598,506	14,263,119
Vacant, for sale or rent.....	1,884,016	923,235	960,781
Percent of total.....	5.0	4.3	6.1
Vacant, not for sale or rent <sup>1</sup> .....	591,249	100,244	491,005
Total population.....	131,669,275	74,421,133	57,248,142
Average population per occupied dwelling unit.....	3.8	3.6	4.0
<b>1930</b>			
Total population.....	122,775,046	68,954,823	53,820,223
Private families.....	29,904,663	17,372,524	12,532,139
Average population per private family.....	4.1	4.0	4.3

<sup>1</sup>Mainly vacant dwelling units (largely seasonal) held for absent households, together with a few dwelling units occupied by nonresident households.

## Clause Advanced by Pittsburgh Plate

ROBERT L. CLAUSE, who joined the company in 1914 as a draftsman, has been elected president of the Pittsburgh Plate Glass Company, succeeding H. S. Wherrett, who becomes vice chairman of the board of directors. Mr. Clause was born in Kokomo, Indiana, on February 23, 1890. Following his graduation from Cornell University as a mechanical engineer, he was employed by Pittsburgh Plate Glass Company as a draftsman in September, 1914. He served successively as an assistant superintendent and as general superintendent of plate glass manufacture. He was elected a director of the company in 1922 and in 1926 he became a vice president. In June, 1940, he was appointed executive vice president. For the past 14 years Mr. Clause has been head of the company's glass division.



ROBERT L. CLAUSE

## Lumber Statistics Service Offered

S. V. FULLAWAY, Jr., secretary-manager of the Western Pine Association, Portland, Ore., announces that its statistical reports, furnished to members, are now available to all lumber buyers and users, including wholesalers, commission men, retailers, industrial users, contractors or other buyers of Western pine lumber and lumber products. A schedule of subscription prices, based on cost, will be furnished upon application.



## "Reconstruction" Theme of Annual General Electric Editorial Conference at Bridgeport

INDUSTRY'S effort to plan ahead for the reconstruction period, as well as caring for the demands of the national defense emergency, was the general theme of the annual editorial conference of the General Electric appliance and merchandise department, held at



BUSINESS journal and magazine editors at G-E conference.

the G-E Institute in Bridgeport, Conn., March 21, attended by some 200 editors and representatives of general, women's, and trade publications.

H. L. Andrews, vice president in charge of the appliance and merchandise department, stressed the need to sustain the flow of consumer goods in order to support the defense program with a sound national economy. As evidence that there will be continuing demand for consumer goods, Mr. Andrews pointed out that General Electric's present total of \$350,000,000 in orders for defense is scheduled for production over a period of several years.

B. W. Bullock, G-E appliance advertising manager, who was in charge of the program, cited the research laboratory and the development of pioneer products as two General Electric activities which have a direct bearing on reconstruction after the defense crisis.

The exacting engineering and research which lie behind the development or improvement of any home appliance were emphasized by A. L. Scaife, merchandise manager, in outlining the activities of the pioneer products section.

A new approach to home building was outlined by C. W. Stuart, manager of the G-E home bureau, in a talk on "Your Home and Your Pocketbook." At the instigation of Mr. Stuart, the G-E commercial research section has compiled a store of information on operating costs supporting the thesis that it can cost less to own and operate quality equipment. Mr. Stuart illustrated his thesis by comparing two theoretical homes. Both cost the same for lot and structure. Into one, Mr. Stuart put conventional operating equipment of lower original cost and into the other he put all quality equipment. By adding up the monthly cost of amortization and of operating essential equipment, Mr. Stuart demonstrated that it could actually cost less to enjoy the conveniences and beauty of high quality equipment.

## Announces New "Plax" Product

THE LOWE Brothers Company, Dayton, O., announces "Plax Water Clear" as a recent addition to its line of paints, varnishes and enamels. This new product is a synthetic water-clear finish for exterior or interior use over painted, varnished, enameled or natural surfaces. It has unusual clearness, gloss and durability. The product is said to be so clear that it does not discolor even the lightest surfaces over which it is applied. It is used on floors, woodwork, furniture, interior trim, window sills, porch ceilings and other surfaces where a durable high gloss finish is desired. It dries hard overnight and provides a long-wearing, gloss-retaining finish for either exterior or interior surface protection.

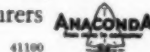
## No Ugly Wall Stains with "Copper-Sealed" Window Frames

*For want of adequate flashing this could happen to any house. A heavy, driving rain—and overnight an ugly wet spot like this could permanently dampen the enthusiasm of the hottest prospect*

Such a condition is simple and inexpensive to guard against. For very little extra cost, "Electro-Sheet" Copper flashing around windows and doors will not only make them weather-tight, but gives you a strong-selling point as well.

"Electro-Sheet" is pure Anaconda Copper. Supplied in weights of 1, 2 and 3 ounces per square foot, it is tough, strong, rustproof, vermin-proof and impervious to air and moisture. When combined with building papers, fabrics and asphalt compounds, it is extremely flexible and easy to install. For concealed flashing it offers the advantages of sheet copper at a fraction of the cost.

We do not make reinforced "Electro-Sheet," but will send samples and names of manufacturers at your request.



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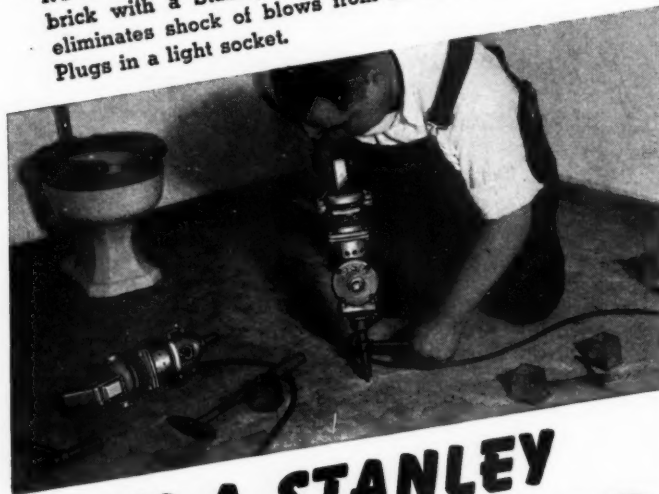


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### STANLEY ELECTRIC TOOLS

"COST LESS PER YEAR"

## FSA Purchasing 2,035 Trailers In "Stopgap" Housing Program

**F**OLLOWING allocation by the President of necessary funds, the Farm Security Administration announced on March 19 that contracts had been let for the purchase of 2,035 trailers to be used as "stopgap" housing in seven crowded defense areas.

C. B. Baldwin, Farm Security Administrator, said that these orders will absorb virtually the entire output of the largest manufacturers in the American trailer business for some time.

The trailer camps will be established as part of the emergency defense housing program, to provide shelter for families of industrial workers in areas where the period of defense employment is expected to be relatively short, or where the temporary shelter can be replaced later by permanent housing. In addition to the trailers, Farm Security will build dormitories for approximately 2,900 single men working in such industries, bringing the total number of "stopgap" housing units up to 4,935 in nine areas.

Funds for this program, totalling \$5,000,000, were provided in a deficiency appropriation bill signed by the President on March 1. Acting on the recommendation of Defense Housing Coordinator Charles F. Palmer, the President on March 18 allocated \$3,617,439 to Farm Security for emergency housing in nine designated areas. These areas, and the number of trailers and dormitory units to be placed in each, are as follows:

LOCALITY	NUMBER OF FAMILY TRAILERS	CAPACITY OF DORMITORIES
San Diego, Cal.	500	1,000 single men
Bremerton, Washington	200	500 " "
Nashville, Tennessee	450	200 " "
Wilmington, N. C.	325	none
Orange, Texas	none	400 " "
New London, Conn.	none	400 " "
Sidney, N. Y.	35	100 " "
Erie, Penna.	200	none
Baltimore, Md.	325	300 " "

"The Farm Security Administration was asked to handle this job because of its experience in building and managing emergency shelter of a somewhat similar type for thousands of migratory farm workers," Baldwin explained. "During the last five years, we have put into operation 53 camps—both mobile and stationary—for migrant families in eight states. These camps can accommodate more than 10,000 families at any one time, and since the turnover is rapid they serve more than 30,000 families a year.

## Duplex Acquires Graves

**D**UPLEX Incorporated, Los Angeles, has purchased the spring sash balance department of the Graves Company, Los Angeles. This purchase includes all machinery and equipment—tools, dies, patents, etc. The new Duplex factory building, recently completed, will be further enlarged to accommodate machinery involved in this transfer.

The Graves Flat-Sash Balance with Patented Glide has been manufactured for the Graves Company by Duplex Incorporated since it was first introduced to the market in November, 1939. Earl M. Pollard, who has been in the sash balance department of the Graves Company for the past twenty years, will continue in the same sales capacity with Duplex Incorporated.

## Certain-teed Building New Roofing Felt Plant

**W**ORK has started on Certain-teed Products Corporation's new roofing felt plant at Savannah, Georgia, a separate building with a daily capacity of 50 tons of roofing felt near Certain-teed's present Savannah plant. The new plant is expected to be operating in 90 days. It is estimated that the existing number of Certain-teed employees at Savannah will be doubled.

This important enlargement of Certain-teed's Savannah manufacturing facilities not only increases substantially the potential roofing output of the company, but increases the felt output available for other industries, at the same time contributing materially to defense housing. It widens the scope of the company's activities which include the manufacture of roofing at Savannah, Ga., Niagara Falls, N.Y., York, Pa., Marseilles, Ill., E. St. Louis, Ill., Kansas City, Mo., and Richmond, Calif.



## "Better Homes & Gardens" Issues Kit of Sales Helps

TO HELP operative builders, contractors and building material dealers plan their 1941 merchandising activities, "Better Homes & Gardens" magazine has issued a portfolio, "Ideas That Sell Homes." The portfolio, containing thirty-seven booklets and other advertising helps, is being given, free of charge, to builders and building material dealers. Financing agencies are also being given the portfolio as a possible means of assistance to their home building customers.

Contents of the portfolio include the "Bildcost" book of 70 home plans, a booklet, "50 Suggestions for Making a Demonstration House Pay Dividends," and a booklet, "How to BUY a Better Home."

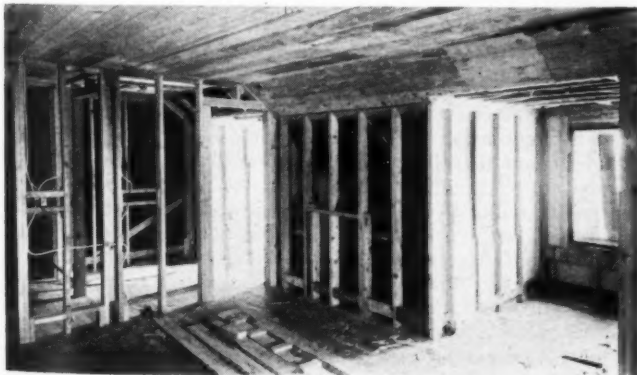
In addition, the builder will find complete suggestions for an inexpensive direct mail advertising campaign as well as a newspaper campaign. Also included are suggestions for job signs for both the exterior and interior of newly-built homes. Booklets on interior decorating and landscaping the home grounds are a part of the portfolio. Because of the great cost of preparing the portfolio only one copy is being given to a firm or individual.

The entire plan is predicated on use by the builder of nationally advertised materials to make his houses sell faster and at a greater profit.

## Home Modernizing Urged

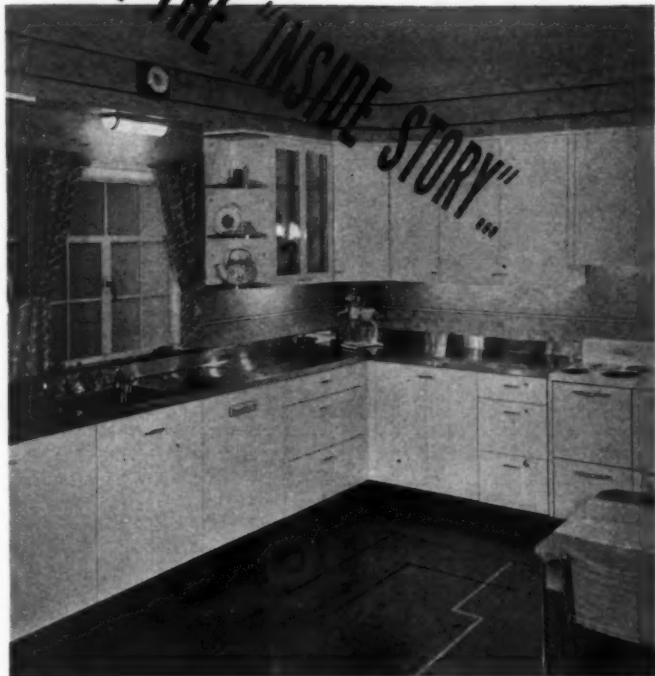
THE modern home has the distinction of utilizing every inch of space. Yet how much room is wasted in an attic like this. Aside from wasting valuable space, a considerable amount of precious heat is lost, too, through this unfinished area. The heat loss may be greatly reduced by lining the attic with Upson Strong-Bilt Panels, suggests the Upson Company, Lockport, N.Y.; at the same time this improved material creates an attractive, livable, usable room.

A few hours' work and the same space becomes a bedroom as light, airy and comfortable the year 'round as any room in the house. Although the Strong-Bilt Panels provide efficient insulation, they have a smooth, beautifully pebbled surface that is easy to paint—easy to keep clean. An attic room like this actually adds dollar value to the home.



OLD UNUSED attic space shown above transformed with Upson Strong-Bilt Panels into charming bedroom.

TELL THE "INSIDE STORY"



## WITH TILE-TEX

IF you are building homes to sell, you know how important it is to make the interior of the home attractive and appealing to women. It is an accepted fact that women control the purchase of most homes, and to women interiors are vitally important.

Here, in Tile-TEX, is a material for both floors and walls that can be used to build modern, attractive interiors in the key rooms of today's home—the bathroom, the kitchen, and the basement playroom. And, in using Tile-TEX, you make important savings against outmoded and conventional materials.

Tile-TEX floors are low in first cost, easy to maintain, long-wearing, and eye-appealing. Kitchens, bathrooms, and recreation rooms are "natural" areas for this new, resilient flooring.

Tile-TEX walls are currently the sensation of the residential home building industry. Low initial cost, speed of installation, attractive color styling—all of these factors are making it the choice of progressive builders seeking to satisfy the public taste for a wall treatment that meets all present day requirements.

There is an approved Tile-TEX contractor near you who can show you Tile-TEX products now in service—show you how little they cost—and demonstrate how they can help you sell new homes. Write today for his address and for free copies of the new Tile-TEX booklets on floors and walls.

**TILE-TEX Company** CHICAGO HEIGHTS ILLINOIS

The Tile-TEX Company  
Chicago Heights, Illinois

Send me complete literature on the following:

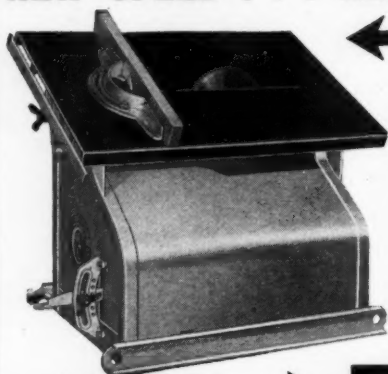
- ☐ "Floors That Endure" by Tile-TEX
- ☐ "Decorative Walls" by Tile-TEX
- ☐ "Flexachrome," an Exclusive Tile-TEX Product

Name .....

Address .....

## KOST KUTTER POWER SAWS

**NEW SPEED . . . NEW ACCURACY**

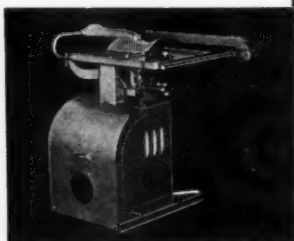


**← KOST KUTTER  
SR.**

Unequaled for accurate high-speed sawing. Big 30" x 48" tilt top table. All-steel welded streamlined—saw dust proofed construction. Powerful 6-H.P. air-cooled engine or electric motor. 14" saw. Also available, the big CMC Power Sawyer with 18" blade.

**KOST KUTTER  
JR. →**

A precision tool. Built to fill the long-felt need among builders for a 10" precision circular saw. Speeds up work. Has 20" x 27" tilting table—powerful 3.6-H.P. 4-cycle engine . . . many new conveniences.



## SPEED UP WORK Mix 40% to 50% More

**NEW CMC 3½ NON-TILT**

**Power Loader speed  
without its cost!**



Waste no time — load while mixing. New, more compact design—lower charging height. Choice of power—optional husky air or water cooled engine. 100% Timken equipped. The best SMALL non-tilt mixer buy today.

The most complete line of small job mixers in the industry. Many models to choose from. A mixer for EVERY job and pocket book.

**GET NEW CMC CATALOG!** Finest equipment book ever issued. In 7 sections. Small job mixers. Big job mixers. Hoe Type Mixers. Batching and placing equipment. Hoists—Dual Prime Centrifugal Pumps—Power Saws. Sent FREE . . . write today.

**CONSTRUCTION MACHINERY COMPANY  
WATERLOO, IOWA**

## LETTERS from Readers on All Subjects

*Facts, Opinion and Advice Welcomed Here*

### A "Socialist" Who Favors Private Home Ownership

Schenectady, N.Y.

To the Editor:

It was with great regret that I read your editorial in the March *American Builder*. Practically every statement you make in regard to socialism is false. It smacks very much of the Hitler idea of using innocent Jews as a scapegoat for all of the ills of Germany.

We have quite a few Socialists in Schenectady and most of them are home owners. They take pride in their homes and would fight to the last ditch to keep them. I do not know a single socialist who would agree for a moment with your statement that socialism means public ownership of homes. Quite the contrary, we are socialists because we firmly believe it is the only way in which we can feel secure in that ownership.

During the past 10 years hundreds of homes have been lost in Schenectady, all due to one cause. Their owners were discharged from private employment and being without income, they could not pay taxes or mortgage interest. Thus private capitalism is alone responsible for the present deplorable state of affairs.

There has been a fair amount of home building in Schenectady in the past two or three years, but it is very noticeable that it is for higher salaried people. The lower paid majority cannot possibly own a home. The only chance for anything like universal home ownership is through socialism, which makes it easy to have full employment and a wide distribution of wealth.

You speak of excessive taxation as though it were a socialistic idea. I am a socialist and I have been advocating for several years that homes be exempt from taxes at least to the extent of several thousand dollars. Several socialists in Schenectady are in the Taxpayers League and are the best fighters against excessive taxes. I cannot imagine a more terrible thing than a man having his job taken away from him and then losing his home because he has no income. But that is the way capitalism works.

We do not have any socialized industries, but we do have socialism in other lines—the post office, public schools, water supply, etc. These lines are remarkable for continuity of employment, making home ownership among employees easy and secure. In the Scandinavian countries where socialism and co-operation are strong, the well being of the people is very high considering the resources of those countries.

None of the measures adopted by the government during the past ten years is socialistic, except the TVA. They were only measures for temporary relief, some approved by socialists as desirable and others as not at all desirable. Real socialism is the only sure way of getting rid of unemployment, poverty and war.

In simple justice to socialism and socialists I believe you should publish this reply.

FRANK H. BLOOD.

### To Fight Local Housing Project

Bridgeton, N. J.

To the Editor:

Your Publisher's Page articles, "Socialism the Principal Enemy," in the February issue and "Socialism, Threat to Home Ownership," in the March issue of the *American Builder*, are very timely and vitally important to the home owners of our community.

I would like your permission to use these articles to fight a housing project which is not a defense housing project, being pushed on our community by a group of local politicians.

J. RUSSELL RIDGWAY,  
Real Estate and Insurance.



**"Interested in Your Constant Hammering"**

Columbus, Neb.

To the Editor:

Yesterday the kind postman left us a copy of your giant April issue. I have not, of course, had time to peruse this number. I did, however, read your editorial, for I am deeply interested in your constant hammering at national socialistic tendencies. This tendency has, of course, been apparent to all thinking men and women in our country for a considerable time.

In a recent letter from Allen D. Albert, past president of Rotary International and noted lecturer and author he makes the following statement in commenting upon a paper I had prepared, "I confess, however, that I am not confident the building industry will be able to see the light. The older I grow the more I despair of that which passes for the intelligence of business men in a democracy. Think of it—for more than a hundred years business has been assailed by socialism; lately socialism has pretty well won the contest; and yet, so far as I have read (and you know how attentively I read in the field), business has never undertaken a simple answer, setting forth the case for non-governmental management." Why do I send you these quotations from the letter of a personal friend? Simply that you may know there are thinking men throughout our country who in their own way are attacking this same problem.

E. J. CHRISTENSEN, Architect.

**Eli Wiener on Slum Clearance Housing**

Dallas, Tex.

To the Editor:

I do not believe these so-called slum clearance or similar housing projects being built by the Federal Government under the local housing authorities of the various cities in the country are a good thing for the country as a whole. Taxpaying houses are being torn down and being replaced by tax free houses which are amortized over a long period of time and at an interest rate which it is impossible for private building interests to compete with. The rent charged by the Government does not permit a private owner to construct rent houses in competition with these houses with any hope of getting any return on his investment, and for that reason the building of these housing groups will have a tendency to restrict private building.

However, if it is the intention of the federal authority to continue building groups of these houses, then full consideration should be given to building houses of material best suited for comfortable living. For that reason, I think that there should be appointed to these local housing authorities some men who are familiar with various building materials for their lasting qualities and their living qualities. This does not necessarily mean that retail lumbermen should be placed on these housing authorities or that all the members of the housing authorities should be practical builders, but at least some members of each local housing authority should be men who are familiar with local building conditions and who can assist the architect in the selecting of proper material for such construction.

The housing groups that I have seen in this section have been built in what might be called one story apartment buildings, that is, several families living under one connected roof. In the South, particularly, I think that housing of this kind should be built as one-family cottages with sufficient ground around each cottage for a small garden and a small chicken yard.

ELI WIENER,  
Wiener Lumber Company.

**An Old-Timer Retires**

Detroit, Mich.

To the Editor:

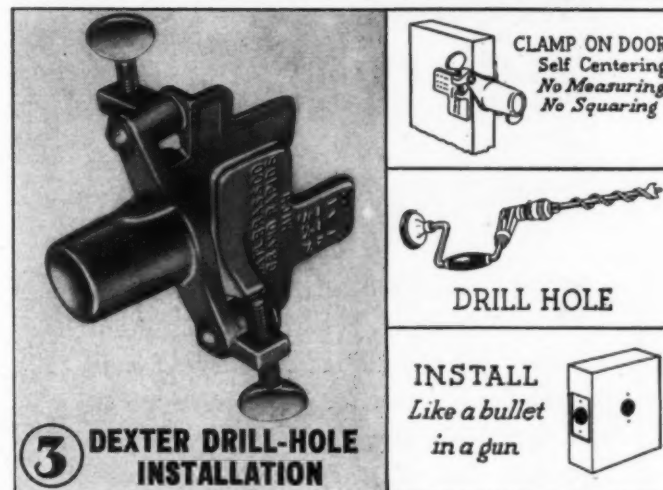
I regret to say that with the present subscription expiration of *American Builder* I will no longer be a subscriber. I am retiring from active building business.

I have not only enjoyed reading the *American Builder*, but it has been a constant source of valuable information during the years that I have spent in building business.

I received my first copy in 1897, then known as "Carpentry & Building"; I was an apprentice then. It is my sincere wish that the *American Builder* may continue to grow and circulate for the betterment of those interested in the trade.

J. A. KAEDING, Building Contractor

# You've Triple Benefits with DEXTER-TUBULAR LOCKS & LATCHES

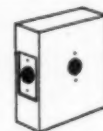
**1 DEXTER HI-STYLE DESIGN****2 DEXTER LIFE-TIME WARRANTY****3 DEXTER DRILL-HOLE INSTALLATION**

CLAMP ON DOOR  
Self Centering  
No Measuring  
No Squaring



DRILL HOLE

INSTALL  
Like a bullet  
in a gun



Houses you build now may have the luxury of Solid Bronze Hardware—at no greater cost than second grade. It's applied costs that count. Dexter-Tubular is "Drill-Hole" installation via Dexter Bit-Guide method. Savings in labor more than pays the difference.

Dexter gives extra sales appeal to your house. French Shank Knob Sets at regular price—that's custom quality without premium. Dexter offers guaranteed satisfaction—it's Life-time Warranted.

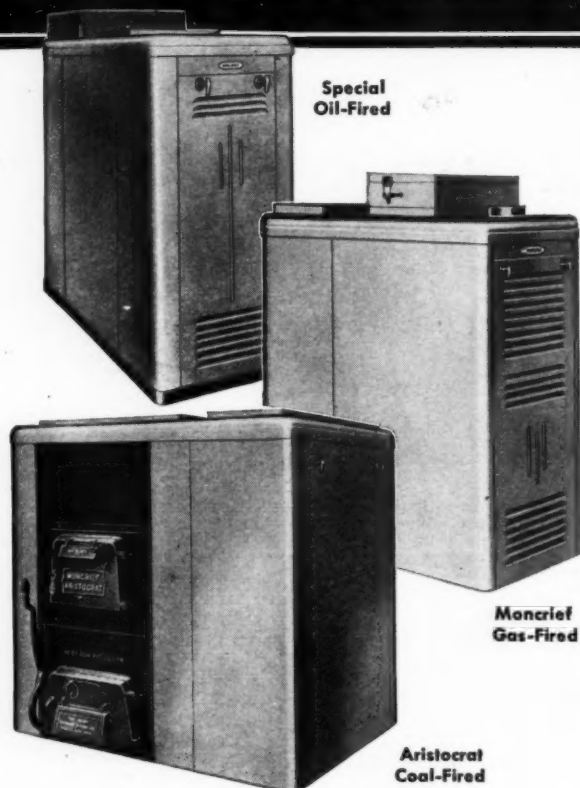
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3479 E. 49th ST. • CLEVELAND, OHIO

## HOLC Experience with Shoddy Construction

Washington, D. C.

To the Editor:

Answering your inquiry it has been the experience of this organization that faulty construction has a decidedly adverse effect on the ability and the desire of many individuals to make the payments which are required by the terms of the mortgages on their homes.

It is only natural that funds should be diverted for the repair of leaky roofs, defective furnaces and other items affecting the habitability of the home and the health of the family. Once an individual has fallen behind in his account, it becomes very difficult to catch up. If he becomes discouraged because of the burden of continual outlays for repairs, then foreclosure and the loss of the home are inevitable.

The Home Owners' Loan Corporation has endeavored to avoid this situation by adopting the policy that all properties which it offers for sale must be reconditioned so that they are clean, livable and desirable homes. In the case of our mortgagors, the Corporation will advance funds for structural repairs where the home owner is unable to provide the money himself and the protection of the security behind the loan makes this desirable. These advances are added to the loan and are repayable over the term of the mortgage. In this way the individual's pride in ownership is retained and he is enabled to keep up his payments by spreading these extra charges over a long period.

D. H. McNEAL, Deputy General Manager in Charge  
of Appraisal and Reconditioning, Home Owners' Loan Corporation

## Weatherproofing on Inward Casement

Dawson, Minn.

To the Editor:

Could you send me some ideas and information on designs for a rain-catcher on inside opening casement windows used on a cottage? The windows swing directly over the sill. The rain runs down the outside and the wind drives it under the sash.

Some designs used by contractors in this territory are not very satisfactory and they have asked me for information. References or information will be greatly appreciated.

I teach architectural drawing here in the high school and *American Builder* is a regular reference. We like it very much.

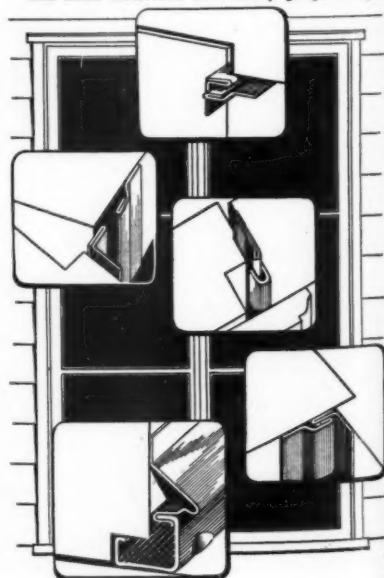
DON L. OLSON, Industrial Arts Dept.,  
Dawson Public School.

ANSWER:

The problem of making inward-opening casement windows storm tight has been solved by the metal weatherstrip people in a very satisfactory way. Simple interlocking weatherstrips

### In-Opening Casement Equipment "O"

Outside interlocking equipment with two member assembly at sill. Combination waterdrip and hook interlocks with heavy gauge trough.



are provided for all four edges, the exact form and pattern varying with each manufacturer but all being pretty much on the same general principle. The most important edge to make storm tight is, of course, the bottom or sill. For this, a heavy gauge trough with weep holes in front wall for drainage is provided as the important member plus an overhanging shield to divert rain.

As an example of these metal weatherstrips, consider equipment "O" of the All Metal Weatherstrip Company. This has a two-member assembly at sill consisting of a combination water drip and hook which interlocks with a heavy gauge trough.—EDITOR.



## Lumber Price Decrease Greatest Among 25 Commodities

Seattle, Wash.

To the Editor:

The cost of lumber has dropped steadily during recent weeks, according to the Department of Labor's Index of Wholesale Prices. The wholesale price dropped 0.3 point in the week ending March 8, and 0.6 point in the week ending March 15. For the latter period, lumber had the greatest price decrease in a list of 25 commodities. Only livestock and poultry came down in cost to the consumer to a greater degree than lumber. The index of all building materials prices stood at 99.4 for the week, the same as the index figure for the week ending February 8.

There are two major reasons for these factual items of good news to the American consumer. Building materials dealers, with other departments of the home building industry, have generally taken strong individual action to maintain a level price movement. In the case of lumber, the disruptive effect of last fall's wild Government buying on the normal market has been remedied. The pressure of cantonnement construction has slackened. Best of all, government buying of lumber has been organized to be carried on in an orderly manner. There should be no repetition of scores of government agencies bidding against each other for this material.

W. C. BELL, Secretary,  
Western Retail Lumbermen's Assn.

## Using Editorial to Fight Public Housing

Mattoon, Ill.

To the Editor:

I wish to compliment you on your very fine editorial, "Socialism, Threat to Home Ownership," appearing on the publisher's page of the *American Builder*, March 1941 issue. It presents very clearly the real danger of government subsidized housing and should be of particular interest to savings, building and loan associations and other home financing institutions.

We have had the subject of a housing authority come up in our city and were successful in stopping it. However, there has been some recent effort to revive it. I would like to have permission to use your editorial in event it becomes necessary to carry our fight against the creation of a housing authority to our local citizens. I may want to have reprints made and extensively circularized.

I always read with a great deal of interest each editorial that appears in *American Builder* and have in some instances read them at our Directors Meetings.

C. R. PLUMMER, Secretary,  
First Federal Savings and Loan Association of Mattoon.

## Early Recruits to the "World's Greatest"

Commerce, Tex.

To the Editor:

I have been a subscriber to the *American Builder* for a number of years, and as I am a teacher of elementary architectural drawing, I use the magazine in my classes as a supplementary text. It is the most valuable and useful of all the magazines anywhere in its price range. On an average, I have about one hundred young men to take this course each year, and they are made familiar with the merits of this builders' magazine.

L. D. KEATON.

## Wants to Know About Soundproofing

New Albany, Miss.

To the Editor:

I would like to be advised the best way to soundproof a division wall in a frame construction building, or as nearly soundproof as possible. Some readers of the *American Builder* may be able to answer.

T. WHAREY NEWTON.

ANSWER:

On pages 80 and 81 of our March issue, you will undoubtedly find the answer to your problem; the reference made in this article to previous material will give you a wide range of insulation application for this purpose. As suggested in your letter, if other readers have had similar experiences, we will be glad to hear from them.—EDITOR.

# Note—

## Narrow window trim with Samson Spot Sash Cord

Modern architecture demands narrow window trim. By the following method it is possible to get a maximum narrow trim right and left of your window and still have room for your weights.

Procedure: — (1) Make window opening  $3\frac{1}{2}$ " larger than normal. (2) After outside wall is boarded in, place jack studs at sides of opening

so that the outside edge of stud lines with outside boarding, instead of the conventional method which is to line studs up. (3) This leaves a  $\frac{3}{4}$ " space between your jack stud and your plaster. Before lathing a  $\frac{3}{4}$ " board of suitable width should be nailed in this space. (4) See drawing and note that the  $\frac{3}{4}$ " board protrudes under your plaster where trim is nailed. (5) Put weights and Samson Spot Cord in position before placing the  $\frac{3}{4}$ " board. (6) With this method it is possible to have almost any width trim desired and still have a good nailing foundation. Your nail goes through plaster and lath to anchor in the  $\frac{3}{4}$ " board. (7) With old method, in order to nail trim securely, it was necessary to have trim wide enough so that your nail would reach jack stud.

THE use of Samson Spot Cord with suitable pulleys and weights assures perfect and permanent balance for at least a generation to come. There is nothing to change or get out of order, the first cost is low, and no bothersome and expensive replacements are needed. Spot Cord is guaranteed free from the imperfections found in ordinary cord. It is easily identified by the Colored Spots (Reg. U.S. Pat. Off.).

**SAMSON CORDAGE WORKS, BOSTON, MASS.**

# SAMSON SPOT

## SASH CORD

REG. U.S. PAT. OFF.

## OVER-THE-TOP<sup>®</sup> DOOR EQUIPMENT

### EASILY APPLIED TO STANDARD, STOCK DOORS



**OR**  
*Specially Built*  
**LARGE, HEAVY  
DOORS**



In addition to being adaptable to practically every type of vertical door, No. 78 "Over-the-Top" Door Equipment offers these other outstanding advantages: requires only 2 1/4" headroom \* friction brake prevents slamming \* extremely low cost installation \* equipped with automatic opener \* adjustable to various size and weight doors \* holds door inside building when open \* equipped with automobile-type, chrome-plated handle-lock. These features, plus low first cost, have made "Over-the-Top" the most popular equipment for "upward acting" doors. Write for further information.

**FRANTZ MANUFACTURING CO.**

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*Guaranteed* **BUILDWARE**

## PRODUCERS TELL US—

*About Products, Personnel, Plants*

### Speedy Roof Laying Test

DEVELOPMENT of a new, low-cost, fast-laying asbestos roofing shingle, known as "American Colonial," was recently announced to the building trade by Johns-Manville. The new shingle, it is said, will enable dealers to provide their customers with a textured asbestos roof having American Method appearance at the lowest cost in J-M history. The American Colonial shingle is a prefabricated asbestos strip shingle, and when applied on a roof, covers as much area as the ordinary asphalt strip. This time-saving feature plus other advantages which contribute further to its ease of application make possible an asbestos roof of unusual economy.

Comparative roof-laying time tests were recently made with the new J-M American Colonial asbestos shingles and ordinary asphalt strip shingles by Gayness and Nelson, prominent builders of Wash-



APPLICATION of Johns-Manville's new American Colonial asbestos shingle during time test in Gaynel Forest, Silver Springs, Md.

ington, D. C., cooperating with Johns-Manville. One of the homes under construction in Gaynel Forest, beautiful new development of Gayness and Nelson in Silver Springs, Md., was used as a testing ground.

The asphalt strip shingles were first applied, then ripped off, and the American Colonial asbestos shingles applied under identical conditions on the same roof, which had an area of three and three-quarter squares. The same roofing crew, consisting of two men and a helper working at normal speed, made both applications. The difference in the elapsed time of the two applications was so slight as to be negligible.

### New Power Plant for Insulite

PLANS for the installation of "standby" power producing equipment to help operate Insulite mills at International Falls and Fort Frances during the seasons of low water, when hydro-electric output fails to meet mill requirements, have been announced.

Work on the "standby" power plant has been started, and will be completed within a year. The project under way is conceded to be the biggest one undertaken by the company for the improvement of mill operations since its plants were erected, more than a quarter of a century ago.

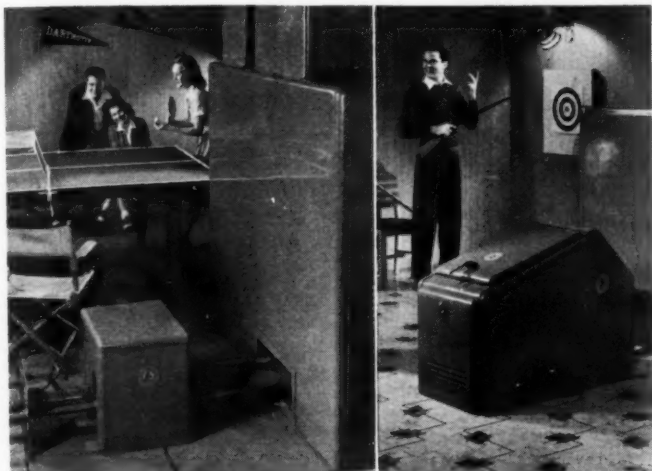
Installation of this auxiliary plant, it is expected, will greatly help to solve the company's power shortage problem which has baffled Insulite mill officials during the past few months and considerably restricted operations.



## New Iron Fireman Models

THE Iron Fireman Manufacturing Co., Cleveland, is featuring usable basements in its current sales work. New style basement recreation rooms have a strong appeal. Illustrated are two examples. The Iron Fireman Standard Coal Flow model feeds the coal directly from the coal bin, which would be built to line up with the steel plate in the photograph (left). The nominal coal feed is 20 pounds per hour.

The driving unit is placed at the side of the furnace opposite the coal bin, providing a maximum of clear space between the bin and the furnace. The distance from the retort to the bin can be from five to twenty feet. The operating mechanism is concealed and protected by an enclosure which provides easy access to working parts.



NEW coal-bin model and hopper model Iron-Fireman stoker.

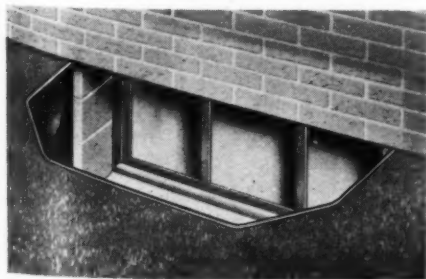
The metering type worm delivers the coal to the fire in an unpacked condition, so the air can easily penetrate the entire fuel bed.

The Standard hopper model (right) is the first Iron Fireman stoker for the small home. The hopper's capacity is 300 pounds of average weight coal, sufficient for a full day's normal heating. Most of the hopper parts are of 16-gauge copper bearing steel.

The feed worm, twisted from bar steel, has a stainless steel tip for resistance to heat and acid corrosion. The stoker is equipped with radial vane fan. Other features include a hopper base clean-out, a combine hopper lid-stop and coal baffle, a spike-grabber guide and wear plate, fume eliminator, hopper vent pipe and retort plenum chamber cleanout.

## New Majestic Window Well

THE Majestic Company, Huntington, Ind., has developed a new design of window well. It is made of 14-gauge steel and reinforced by a steel rod welded to the top edge. The smooth inside surface reflects the light, does not readily streak with dirt. Also the fill around the well does not have a tendency to pull the well away from the foundation.



MAJESTIC steel window well.

This new Majestic window well carries a 20-year guarantee; registration blank is attached to each well.

The Majestic window wells are offered in both the straight and round types and in all popular sizes. Also available are strongly constructed hinged gratings that can be used over the well when it is desired to make the basement window burglar-proof, or to prevent the accident hazard of a pitfall.

# "It's Charming!"

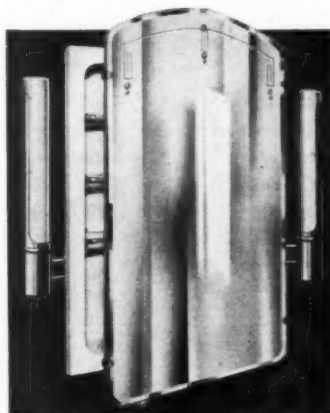


## - But will the Bathroom Clinch or Spoil your Sale?

The impression your prospect gets of the bathroom and kitchen can make or break your sale!

That's why it's so important that the appointments in the bathroom harmonize with the architecture of the building and the general decorative scheme.

The Lawson complete line of bathroom cabinets is a "natural" for builders because we have studied the needs of every type of builder—from the low cost housing field to the homes in restricted residential areas.



125 YEARS  
OF QUALITY  
*Lawson*

In honor of our Century and a Quarter Anniversary we have just introduced—in addition to our popular low-priced baked enamel line for budget homes, maids' rooms, servants' quarters, etc.—a complete line of "Time-Proof" Vitreous Porcelain finished Cabinets—with and without side-lights—at baked enamel price levels.

Thus, more than ever, there is a high quality, beautifully styled, handsomely finished Lawson Bathroom Cabinet at every price level for every home.

THE F. H. LAWSON COMPANY

Bathroom Cabinet Division,

Cincinnati, Ohio

World's Largest Builders

125 YEARS  
OF QUALITY  
*Lawson*

of Bathroom Cabinets

SOLD EXCLUSIVELY THROUGH WHOLESALE OUTLET

## Pine and Stone Ski Shelter

THE tremendous interest in recent years in skiing has brought about the development of many splendid winter sports areas from the Adirondacks of New York to the high Sierras of California. One of the west's greatest skiing centers is the develop-

ment by the Southern Pacific Railroad, ski clubs and others in the Norden-Donner Summit mountain area of California. Not only have excellent skiing facilities been provided, but dotted throughout this area are a number of lodges and resorts all catering to the comfort and pleasure of the winter sports folk. Among them is Rainbow Tavern, which is one of the finest winter resorts in California. Architecturally, this mountain inn

is an interesting example of combining Ponderosa pine log cabin siding and native stone for exterior side walls. This is particularly appropriate since the Tavern is located beside a rocky stream and in a rather heavily wooded area. The lounge has heavy beamed ceilings, stone as well as knotty pine walls, and very colorful drapes and furniture. Even the bedrooms show the contrasting walls of stone and pine. To give these rooms further atmosphere, the doors are painted different vivid colors.

Many of the skiers detrain at Southern Pacific's Ski Hut at Norden, which is a "house within a house" for it is built under the protection of a railroad snowshed. Sleeping and eating accommodations, also a store, check room, warming drying rooms, ski racks and other facilities are available here at reasonable prices. The interior of the Norden Ski Hut is all nicely paneled in knotty pine, which gives it an informal, cheery atmosphere for skiers to lunch and rest.

Slightly more than a mile from Norden is located Sugar Bowl Lodge, which has captured the charm and comfort as well as the gayety and spirit of the Tyrolean Alps. Completed in 1939, the Lodge was designed by William Wilson Wurster, well-known San Francisco architect, and the style is called "Tyrolean Modern."



LOUNGE of the Rainbow Tavern, heavy beamed ceilings and Ponderosa knotty pine walls combine with native rock.

• You're invited to get acquainted with the "Architects' and Builders' Service" provided by your local telephone company. Call your nearest Bell Telephone Business Office and take advantage of this free service.



OF ALL the inexpensive features in today's homes, built-in telephone outlets are among the most effective sales helpers. They add a lot of living comfort. They indicate quality construction throughout the house. Yet, installed during construction, a telephone outlet costs about the same as an ordinary electric outlet.



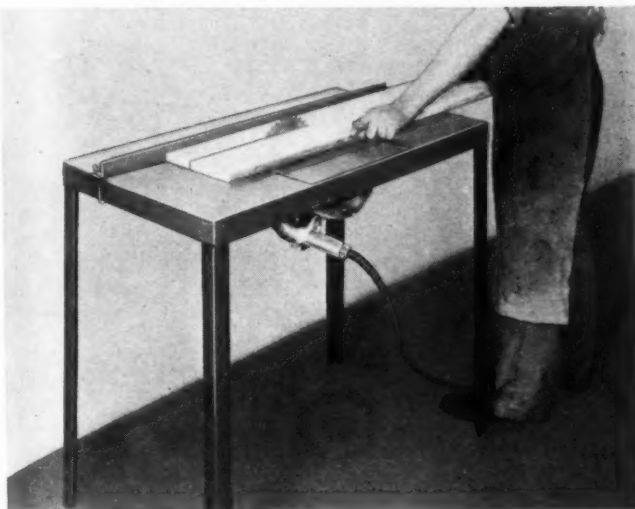


This design takes advantage of the views of the ski slopes by placing all the rooms, as well as the lounge and dining room, on the front of the building. Since heavy winds frequently hit the front of the Lodge, heavy 12x12" timbers, steel braced, run from the ground to the top of the building. Ponderosa pine boards and battens were used for the exterior walls, and the porch deck is covered with heavy-duty pine flooring. In keeping with the rustic design, the interior walls of Sugar Bowl Lodge, including the lounge, dining room and bedrooms are paneled in knotty Ponderosa pine.

### Portable Saw Table

A PORTABLE saw table which can be knocked down to be taken out on the job, quickly set up and used to convert the No. 85 Quick-Saw to saw-table use for fast, correct ripping, mitering, and beveling, is being manufactured by Van Dorn Portable Electric Tools, Towson, Md.

The saw-table of the portable saw locks in place in the center of the table top and all depth and angle adjustments on the No. 85 Quick-Saw can be made in saw-table use. This table is made of sturdy heavy gauge metal with demountable legs, an adjustable ripping guide and clamps to hold the saw in place.

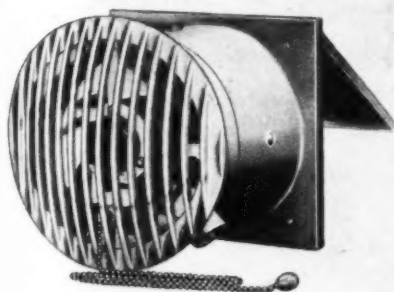


"KNOCK-DOWN" portable saw table for No. 85 saw.

### New Ilg Fan for Home Ventilation

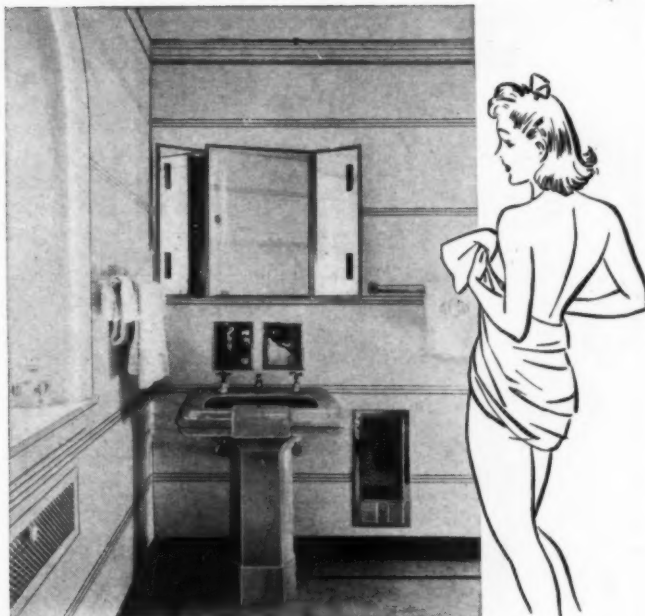
ILG Electric Ventilating Co., Chicago, has announced its new "Ilgvent" line, headed by a streamlined, modern built-in model that becomes an integral, permanent part of the building wall. Designed to ventilate properly kitchens, bathrooms and rumpus

rooms in modern homes and apartments, the new "Ilgvent" has capacity of 350 C. F. M. (ample air change for small kitchens), low initial cost, low operating cost, and quiet free-running operation.



NEW "Ilgvent" built-in model.

The 16-gauge rust-resisting steel cabinet of the built-in model is of the telescopic type with a standard sleeve to fit a wall from 8½" to 13", and units to fit walls of 5¾" to 8½" . . . 13" to 22" . . . and 22" to 31" thickness are also available. The weather-proof, one-piece door on outside of house is opened or closed by a beaded pull chain, simultaneously causing fan motor to start or stop. The motor is neoprene-mounted with lubricated-for-life bearings. The newly-developed fan wheel is electrically tested for dynamic balance. The grill is of polished aluminum.



### THERE'S A "Feminine Angle" IN TYLAC CURVES

LAST MONTH we emphasized the influence of TYLAC curved interiors on the sales curve for builders and contractors, but we didn't forget the fact that women admire curves, and it's largely women who decide about bathroom and kitchen walls. They not only admire the lustrous, streamlined beauty of TYLAC walls, but they know that those smart, gleaming surfaces are easy to clean, and retain their beauty indefinitely.

TYLAC wall covering will add brilliant showmanship to low-cost private housing or remodeling jobs—fine enough also for the costliest home or a swank commercial interior. "Miracle Walls" by TYLAC will open up new sales opportunities for you with endless possibilities for contrasting, harmonizing designs and color combinations.

TYLAC is easily applied over any surface, old or new, flat or curved. Needs no painting or varnishing, ever. It is predecorated at the factory with a finish that withstands hot water, fruit juices, fats, oils, household acids, alcoholic beverages. Will not chip, crack or craze. Get full particulars now.

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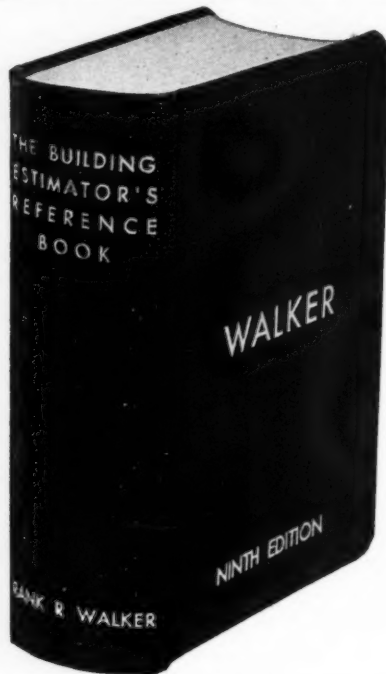
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This New Guide contains just the information you need to prepare your estimates quickly and accurately. It gives the correct method of measuring and listing quantities from the plans, together with accurate material quantities and the labor hours necessary to complete any class of work.

Regardless of whether you do alteration, remodeling or repair work; or whether you build houses, apartments, commercial or industrial buildings—large or small—it contains just the information you require to prepare money-making estimates in the shortest possible time and with the least possible effort.

1,678 pages, illustrated, index, 4½ x 6½, flexible, \$10.00.



### Vest-Pocket Estimator

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This popular little book (not sold separately) contains 220 pages of up-to-the-minute estimating and cost data in condensed tabular form for ready reference. Fits right in the vest pocket and is always with you on the job or in the office ready to help you with your daily problems: Worth its weight in gold to every contractor and estimator.

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### "Electric Pigs" in Ford Homes

THE distasteful task of removing waste food has been completely eliminated for homemakers occupying the Ford Foundation apartments at Dearborn, Mich., through installation of Hotpoint kitchen waste exits in all of the Foundation's 203 dwelling units—what Henry Ford calls "electric pigs." This device, installed under the sink in each kitchen, reduces all food waste to a watery pulp, and flushes it down the drain.

As refuse accumulates, it is scraped directly into the sink drain opening. The metal control cup, which replaces the ordinary sink-stopper, is turned to the "On" position, and a moderate stream of cold water turned on. Inside the waste exit, the garbage is hurled against a double row of stationary shredders, made of "Carboloy," a material next to the diamond in hardness, which never needs sharpening. The shreds are mixed with the cold



TYPICAL installation of Hotpoint kitchen waste exit, in a kitchen of the Ford Foundation apartments, at Dearborn, Mich.

water until they become a pulp, fine enough to pass through the strainer, and into the drain line. This scouring, flushing action cleans the machine itself and the drain line, thus helping to prevent stoppages. Three quarts of waste matter can be handled at one time by the Hotpoint waste exit; this includes bones, cobs, pits, vegetable and animal matter; in fact, every kind of food refuse which created an unpleasant problem for every home maker.

Along with its features of sanitary convenience, the Hotpoint kitchen waste exit is entirely safe. Inquisitive fingers cannot get into the drain opening while the waste exit is operating, since the control cup is sealed in place while the motor is running. Turning it to the "Remove" position turns off the motor and stops the shredders.

No special wiring is required for the Hotpoint kitchen waste exit, its motor operating on an ordinary, 110 volt house circuit.

### Modernizing Booklet to Put New Life and Style in the "Old Homestead"

MODERNIZING business can be created on almost any residential street in America!

To help lumber merchants generate more of this kind of "plus" butter-and-bread trade, the National Lumber Manufacturers Association, Washington, D.C., has just released a new 24-page, two-color suggestion booklet, illustrating how 18 common types of 25 to 100-year-old American homes may be successfully and profitably modernized. The new booklet is entitled "There Is Plenty Of Life Left In The Old Homestead."

The booklet has been so prepared that the outside back cover is available for the individualized message of any lumberman or builder who may imprint there either a full page advertisement, or his name, address, telephone number, etc.

While copies of the new booklet, which also contains suggestions for interior modernizing, are available without charge to interested lumbermen, a charge of 10c per copy is made for single copies sent to non-lumber individuals. The quantity price to lumbermen is the printing cost—or 6c each.

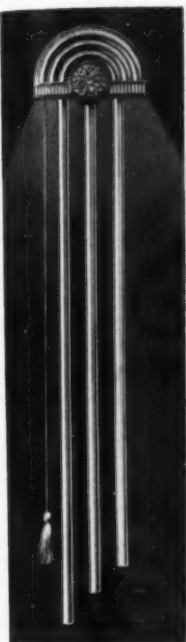


## NuTone Door Chimes in Demand

RESPONSIBLE estimates of residential building and remodeling point to the largest volume in a decade. And the noise of carpenters' hammers can well be the forerunner of later music, the musical notes of NuTone door chimes. These handsome, nationally advertised chimes are the modern adjunct for any type of home, whether it costs little or much, whether it is speculatively built, or planned and supervised for a client. They are furnished by NuTone Chimes, Inc., Cincinnati.

Women are delighted with this further refinement in the art of living. They are proud to have guests announced by the two mellow notes sounded by every NuTone chime as a front door signal, proud to have guests see NuTone's harmonious beauty in their homes. The confusion of distinguishing doors is solved by NuTone's single note for the back door. All NuTones are two-door chimes.

Shown here is the *Notre Dame* "3" with night light for added beauty and illumination. This long tube model in 3-tube effect has beautifully embossed cover in ivory or walnut unbreakable plastic, and brass tubes.



NuTONE Door Chime with night light.

## New Wood Siding Nails

A NEW nail which is non-loosening and rustproof has just been introduced by the W. H. Maze Company of Peru, Ill., and is known as the Zinclad wood siding stay. The name, stay, is derived from the fact that this nail stays in, stays rustproof, and also enables the paint to stay on the head. It comes in six sizes.

To prevent loosening and pulling out, this new stay nail carries a series of raised retaining rings on the shank; when driven, these rings imbed themselves in the wood, increasing the holding power very considerably and preventing the nail from "popping" out.

High resistance to rust is assured on these stay nails by a heavy zinc coating applied by the dipping process; this zinc not



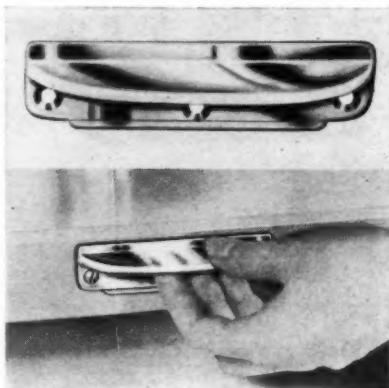
ZINCLAD wood siding stay.

only preserves the nail and prevents rust streaks, but also tends to preserve the wood around it by chemical action. Another feature of this stay nail is its checkered head which provides a better bond for painting, and prevents shedding.

## Streamlined Sash Lift by Amerock

REPRESENTING a real improvement in sash lift design, the new "Amerock" Sash Lift shown here is streamlined for beauty—engineered for strength! Seven words summarize its main features—"Easy Up, Easy Down, Easy to Clean."

This new sash lift provides a positive finger-grip for raising the window and a smooth comfortable surface for lowering. It is available in either steel or brass in all standard finishes from the American Cabinet Hardware Corp., Rockford, Ill.

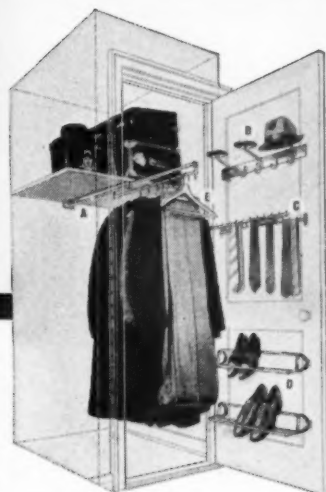


NEW streamlined sash lift design.

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IN brief, it's lack of adequate closet space. K-Venience fixtures easily solve this problem... without the need of adding cubage...

in new houses and old... at almost negligible cost. K-Veniences make the most of any closet size or shape, in many cases actually double useable capacity and provide a handy place for all apparel. Chrome finished, beautifully made, they are really useful fixtures your clients will praise you for many times over.

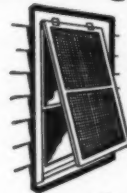


Shoe and tie racks, extra long garment brackets, hat holders, trouser-skirt hangers, slide-out clothing carriers, extension closet rods, towel bars, umbrella and cane holders, and many others.

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K-VENIENCE CLOSET FIXTURES

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ROLLING DOORS

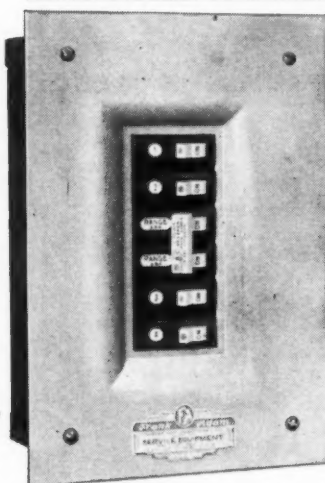
**NEW**

You will want this new 1941 issue of the book that gives complete, convenient information on how to meet every door requirement the better way—from the smallest residential garage to the largest industrial or commercial service entrance. It tells you how and why Kinnear Rolling Doors, Steel Rolling Grilles, Wood or All-Steel RoL-TOP Doors, and Rolling Fire Doors and shutters provide unsurpassed convenience, efficiency and economy. Send for your Free copy today!

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Service Equipment with 1/2 D.P. 35 Amp. AC Circuit Breaker for range circuit. Also 4 S.P. AC Circuit Breakers for light and appliance Branch Circuits. Cat. No. SE41-3L7F List Price . . \$11.00

## Restore Service Quickly!

When the lights go out, because of a short circuit, or sustained overload, simply turn the handle to the ON position after the cause has been removed.



## TYPE AC CIRCUIT BREAKER SERVICE EQUIPMENT and LOAD CENTERS

give you this advantage — and in addition, afford modern protection against momentary overloads. Especially desirable for residential installation, they are attractively designed and finished — take up small space — and are safe and easy to operate.

You'll be surprised to learn how much more you get — and how small the cost, in this efficient equipment.

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## 125 Years of Lawson

AS The F. H. Lawson Company, Cincinnati, Ohio, manufacturer of bathroom cabinets, celebrates its Century and a Quarter Anniversary, research instituted by Frank H. Lawson, representing the fifty generation of Lawsons, has disclosed many interesting facts about its early history.

Cincinnati was only an outpost in the wilderness, in 1816, when Thomas Lawson arrived from Pittsburgh on a flatboat, built a crude log cabin and opened



**FRANKLIN H. LAWSON,** secretary-treasurer, The F. H. Lawson Co., which is celebrating its 125th anniversary.

shop as a "Tin-Plate Worker, Brazier & Iron Monger." Thus started The F. H. Lawson Company, which has grown steadily until today it is one of the largest manufacturers of steel bathroom cabinets. In addition, Lawson is a leading manufacturer of many other types of metal products used in the home and by institutions, schools, hospitals, hotels and service stations.

In honor of its "Century and a Quarter" Anniversary, a complete line of Lawson "Time Proof" all-porcelain finished bathroom cabinets has been produced—with tubular side-lights optional.

## Stain-Resistant Bathroom Wall Panel

THE Ingram-Richardson Manufacturing Company, Beaver Falls, Pa., is announcing a new porcelain enameled wall panel for bathroom walls which is furnished in six rich colors—green, yellow, blue, cream, black and white. Some of the advantages of this panel are: true, fade-proof colors; glass-like, easily cleaned surfaces; imperviousness to ordinary stains and permanence in all respects, including lack of necessity for refinishing at any time. Also a feature is quick, easy installation by a whole sheet-at-a-time method. This is easily accomplished by any workman without any cutting, fitting, butting, special joinery or other specialized craftsmanship.

Adequate precautions have been observed to compensate for inaccurate studding, etc., by means of a special lap-seam expansion joint which permits ample adjustment. All seams between sheets or adjoining surfaces seal water-tight and exclude all dirt or sediment accumulations. Any type of wall fixture can be readily installed, including the recessed type, and the panels are designed for the use of any chrome, stainless, plastic or other decorative cap and cove moulding.

This new porcelain wall panel can be utilized to reduce fabrication and erection costs to a minimum in apartment and group housing projects having multiple, standardized bathroom sizes. However, the material is readily adapted to individual bathroom designs at moderate cost. The panel is also adaptable to kitchen walls, but is not being developed in sizes for this use at present.



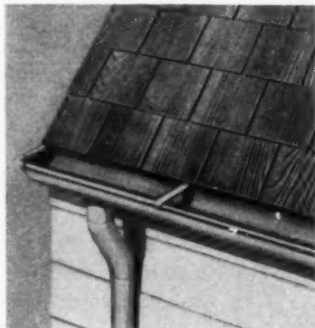
**ING-RICH** porcelain enameled panels installed on bath walls.



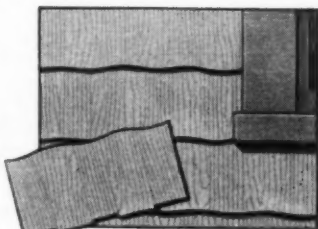
## Asbestos-Cement Siding Has Porcelain-Like Surface

THE Philip Carey Co., Lockland, Cincinnati, has perfected and now offers Carey "Ceramo" siding and shingles with a vitreous mineral surface fused on to a base of asbestos fibres and portland cement, providing a product of flint-like hardness that is said to clean as easily as porcelain.

Natural weathering, due to the action of rain, snow, ice, heat and cold, is said to have a negligible effect on this vitreous surface. Tests show that neither moisture nor dirt penetrate the hard, smooth surface; that water will not darken it and that dust and dirt are washed off by normal rainfall. Further, these reports affirm, any film that might adhere, after long exposure to the severest conditions of smoke and soot, may be washed off with soap and water as easily as cleaning window glass.



CAREY'S new "Ceramo" asbestos shingles and sidings have porcelain-like surface.



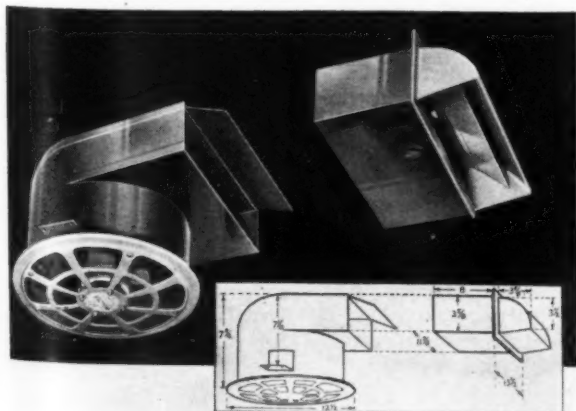
The "Ceramo" shingles are offered in several beautiful ceramic colors, including dove gray, cardinal red, ebon black, holly green and Congo brown; also a brilliant white, said to be the "whitest white."

## New Ceiling Type Ventilator

THE latest addition to the line of Victor home ventilators, manufactured by Victor Electric Products, Inc., Cincinnati, is the new ceiling type ventilator VS 50-U. This unit requires a ceiling opening of only 11 1/4 inches in diameter, an outside wall opening of only 12 1/4 x 3 3/8 inches, and can be installed in any ceiling that has an air duct between floors.

This ventilator is simple in design; the round grille is finished in silchrome and the outside housing in high gloss battleship grey enamel; it is constructed for long life in operation. Two self-acting louvers open and close automatically with the starting and stopping of the fan, one of them being placed at the end of the fan housing and the other in the outside wall hood. Positive weathertight sealing of the louvers prevents all possibility of heat loss and back draft.

The ceiling unit is quiet and efficient in operation. A snap of the switch button instantly whisks out all cooking odors, fumes, and stagnant air that naturally rise and collect near the ceiling, leaving the room pleasantly clean and fresh.



NEW Victor ceiling type ventilator can be installed in any ceiling that has an air duct between floors.



Knot-free in all grades, CRD Bungalow Siding holds paint better, will add sale-ability to your houses. Ask your lumber dealer for today's favorable prices.

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The new WHIZ ELECTRIC TOOL is the handiest power tool ever made. A rugged tool for power and precision work. Drills through 1/4 inch iron plate in 42 seconds or engraves intricate designs. Handles any material: Metals—Woods—Alloys—Plastics—Glass—Steel—etc. Saves time. Eliminates labor. Plug into any socket AC or DC, 110 volts. Chuck 1/4 inch capacity. Ball bearing thrust. Powerful, triple-gear motor. STANDARD MODEL, with Normal Speed (uses 200 different accessories, instantly interchangeable). Price only \$7.95

The only DRILL-TOOL with a full year's guarantee

**FREE** Accessory outfit (Value \$2) includes set of drills, mounted 1 1/2 inch grinder, sanding discs, cutting wheels, mounted brush, polishing wheel, carving burr, etc. FREE with each tool ordered NOW. We pay postage.

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**Amerock**  
*Achievements!*

**3 DESIGN GROUPINGS**

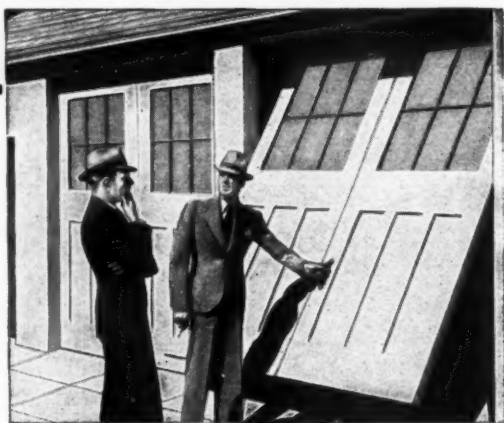
DE LUXE

STREAMLUX

STANDARD

3 distinctive design groupings at graduated price levels provide a wide selection of quality cabinet hardware for every purse and purpose. Only "Amerock" covers the complete price range under one name.  
Retail prices of drawer pulls illustrated are: De Luxe 40c, Streamlux 30c, Standard 15c.

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AMERICAN CABINET HARDWARE CORP., ROCKFORD, ILL.



## "Swing It" and Sell It!

If you want to add sales appeal to a house, add a set of Stanley "Swing-Up" Hardware to the regular stock doors you use on the garage. Makes them into a single, smooth-working door that glides up out of the way with only a slight starting pull.

Stanley "Swing-Up" Garage Door Equipment adds only about \$20.00 to the cost of a house—and adds plenty to its sales appeal! Your dealer can supply everything you need in a single package—or write for folder. The Stanley Works, New Britain, Connecticut.

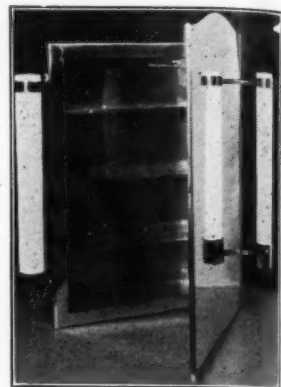
**STANLEY**

TRADE MARK

HARDWARE FOR CAREFREE DOORS

## New Mastercraft Stainless Steel Cabinet

NATIONAL Metal Products Company, Waterloo, Iowa, has announced a new stainless steel bathroom or medicine cabinet of lifetime beauty. Its highly polished cabinet is in keeping with today's trend of bathroom design—and the construction meets the wide acceptance of stainless steel. This new cabinet is available in either an electric-lighted model—or in a standard design—both are furnished with quality mirror, and in a range of sizes. Prices are surprisingly low.



NEW "Mastercraft" stainless steel cabinet.

## Wall Panels with Scored Joint Lines

DEVELOPMENT of a new type score line for DeLuxe Monowall Tile-Designs which gives the individual field tile the appearance of having rounded edges has been announced by the Building Materials Division of the Armstrong Cork Company, Lancaster, Pa. At the same time, the Company stated that a new type of hardboard base material will be used in the production of DeLuxe Monowall which will provide a smoother surface for the finished product.



SCORED joints on Monowall Tile-Design.

In the new tile-designs, the widths of the contrasting score lines have been decreased. This, combined with the rounded edges of the field tile, more nearly simulates mortar lines joining the so-called "cushion edge" type of ceramic tile. The streamlined grooves in the tile-designs not only provide attractive overtones, but additionally simplify cleaning by helping to prevent the collection of dust and dirt.

DeLuxe Monowall will be supplied in thirty colors in plain, and tile-, marble-, or wood-designs, including ten featuring the new score lines.

## McPhee Has New Post At Dodge Truck

APPOINTMENT of E. J. McPhee as general superintendent of the Dodge Truck Division, Chrysler Corporation, has been announced. He has been Superintendent of Assembly since production of Dodge trucks was started in the new Mound Road plant in September, 1938, and was one of a group of manufacturing officials who helped map production processes and lay out the Dodge Truck plant.

Formerly he had been Chief Inspector of Production at the Chrysler Corporation Highland Park Plant and Superintendent of Assembly at the Chrysler Jefferson plant.



E. J. MCPHEE



## National Gypsum Co. Acquires Gimco Rock Wool

THE NATIONAL Gypsum Co., Buffalo, N.Y., has purchased the assets of the General Insulating and Manufacturing Co., makers of Gimco rock wool products. The move increases National's production facilities to 21 plants by the addition of rock wool plants in Alexandria, Indiana; Dover, New Jersey; and Dubuque, Iowa.

These three plants will manufacture a complete line of Gold Bond Rock Wool products including: double and triple thick rock wool batts backed with a fibre skin, vapor-proof liner; Handi-batts of wall thickness without a liner; single, double, and triple thick blankets sealed with a vapor-proof fibre-skin paper on one side, with a heavy crepe paper on the other; loose pouring. All these products will be sold under the Gold Bond brand name through regular dealer channels.

The brand name Gimco will be retained by a separate sales organization. Merchandising and promotional plans for this brand will continue as heretofore.

## Easy to Clean Around This Pump

THE designers of this new, ejector-type, shallow well water system had housekeepers' interests in mind when they positioned the motor and pump assembly. Instead of placing this unit conventionally, on the floor, they mounted it on a bracket which extends from the side of the tank high enough above the floor so that a dust mop or broom may be passed under it.

Because water systems are often placed in kitchens or utility rooms, where frequent cleaning is the good housekeeper's rule, women like this feature particularly. They like, too, the quiet operation. Quiet is achieved by rubber mounting of the motor and pump and by rubber hose connections which prevent transmission of motor and pump sounds to the tank where they would reverberate.

Fairbanks, Morse & Co., Chicago, the manufacturer of this neat, attractive new water system, reports that it is available at moderate prices in four sizes ranging in capacity from 290 to 800 gallons per hour.



NEW Fairbanks, Morse electric water system.

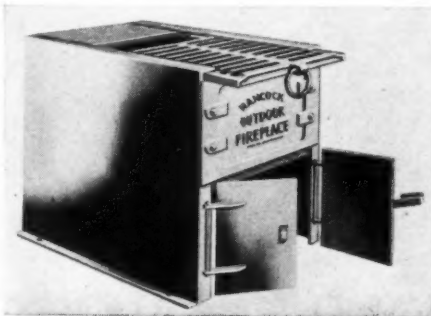
## Outdoor Stove for Public Parks

THE Hancock Iron Works, Pontiac, Mich., has recently produced an improved design of its outdoor fireplace units, called the "Parks Special," for the use of public parks. This is a complete unit, for use either with or without enclosing masonry, and may be installed in permanent base or left movable.

This stove is made of heavy rolled plate steel, and there are two grates, the lower one for the charcoal or wood fire and the upper one for cooking; the upper grate slides forward for fueling. Draft and clean-out doors are provided.

The construction is heavy arc welding, and movable parts such as grate and doors are so enclosed that they cannot be completely removed. The size of the stove over all is 17½ inches wide, 22 inches long, and 21 inches high; the cooking area is 16 by 22 inches, and the weight, 175 pounds.

OUTDOOR fireplace unit for use in public parks.



# ALLITH



## THE OWNER BLAMES YOU

He and his family will use the garage doors on rainy days—icy days—and cold, frosty, snowy days. If the doors give them trouble—they'll blame you.

The Push-over Stock Set is the answer. It is dependable, fool-proof and trouble-proof. It will fit all openings up to 8' 11" wide by 8' high. Sets for wider opening have two top tracks, only 5½" headroom needed.

**ALLITH-PROUTY, INC.**  
DANVILLE, ILLINOIS

## File this One Up THERE



- Approved and accepted on U.S. Government projects.
- Meets requirements of N. D. M. A. and Western Pine Association for dimension control and preservative quality.
- Protects against moisture absorption, grain raise, abrasion, fungus growth.
- Penetrates and provides perfect base for paint, stain or other finishes.

Play Safe! Use REZ on your next job.



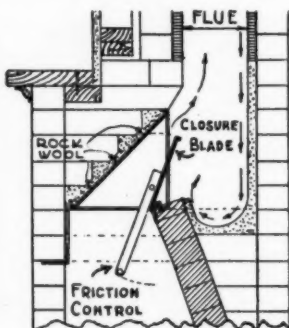
## I. F. LAUCKS, Inc.

SEATTLE . . . . . 911 Western Avenue  
LOS ANGELES . . . . . 859 E. 60th Street  
PORTSMOUTH, VA. . . . . Commerce and Broad Sts.  
VANCOUVER, B. C. . . . . Granville Island



## SUPERIOR form damper

**A real friend to architects and builders**  
because it is a high form around which the important  
"THROAT" of the fireplace is built.



Note proper hinging and operation of the damper, which does not allow closer blade to open beneath chimney flue and split the draft, but instead the closer blade acts as a baffle to turn wind drafts back up the flue, thus preventing smoke and ashes from entering the room.

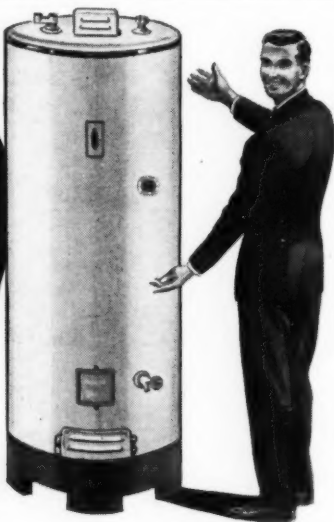
Building supply dealers are invited to write for dealer and distributor proposition.

**Superior Fireplace Co.**  
1046 S. Olive St.  
LOS ANGELES, CALIF.

Put in porcelain  
enameled tanks

Now you can give your customers a better hot-water tank at surprisingly reasonable cost. This new tank is porcelain enameled *inside*. The hard, durable finish cuts down the chances of tank leaks and rusty water, lengthens tank life and meets all code requirements. Helps sell your houses too.

And when the porcelain enameled tank is made of ARMCO Ingot Iron, you can assure your customers of the

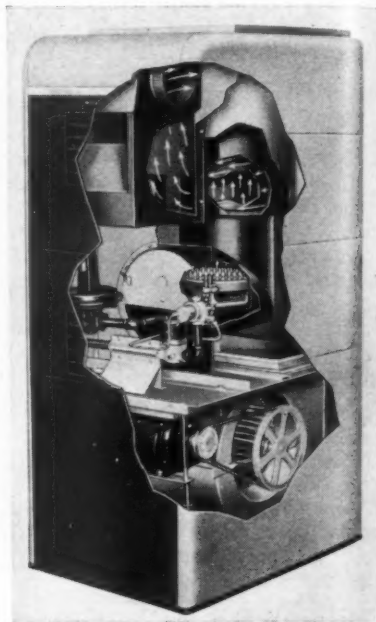


finest basic quality. They will agree, because they have learned about this "world's standard enameling iron" from 27 years of national advertising. Write for the facts. The American Rolling Mill Co., 1371 Curtis St., Middletown, Ohio.



## New Mueller Air Conditioners

THE L. J. Mueller Furnace Co., Milwaukee, has brought out three new models designed specifically for the small home market. Each of these units is designed for a specific fuel—coal, oil, gas. The "Series 400" is a steel furnace, a smart looking unit designed especially for the small home and the price market, and yet a quality coal burning unit from every standpoint. The "Series 50" is an oil-fired air-conditioning furnace, beautifully styled and sturdily built. And the "Series SHP" is a compact gas-burning winter air conditioner. As shown in the cut-away view it is the essence of compactness,



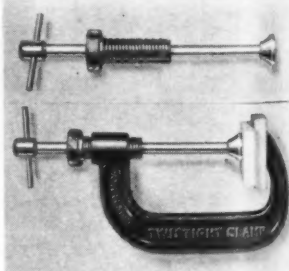
MUELLER "Series SHP"  
gas-fired air conditioner.

yet with no sacrifice of performance efficiency or accessibility. Here is a unit equally as effective in the home with or without a basement.

The design features the return air inlet at the bottom of the unit, allowing for under-floor return air ducts and connection. The sturdy steel base angles also act as the filter track when the air is taken in from the bottom. Provision is also made for return air inlet at either side, if desired, in which case filter rails are not standard equipment, but are available for inclusion in the return air duct connection.

## New Push-Pull C-Clamp

A NEW type C-Clamp and pressure unit are being offered by the Mechanics Engineering Company, Jackson, Mich., under the name of the "Twistight Push-Pull C-Clamp." The mechanism is simple, consisting of rolling clutch inside of a screw barrel which grabs the smooth rod so that the foot of the clamp may be instantly adjusted to any thickness of material to be held. A turn to the left and a pull opens the clamp to its full capacity; a push and turn to the right locks it, and a half to a full turn applies the pressure. The pressure unit shown above the C-Clamp is to be used in jigs.



"TWISTIGHT" C-Clamp.

The instant opening and closing features make this a perfect clamp for the cabinet makers, carpenters, furniture, boat and welded construction industries where the clamp must be opened to its full capacity to be inserted around an angle of material and then closed down to very small size to hold the material being fabricated.

## More Marriages and Homes Expected

A LARGER potential demand for homes is expected in the decade between 1940 and 1950 because of the anticipated increase in the number of marriages, the Federal Home Loan Bank Review states in a study of new Census results and their effect on housing.

According to preliminary data of the Census Bureau the next



ten years will see a considerable increase in the number of persons in marriageable ages. The Review article said:

"The number of persons most likely to marry in the early years of the present decade—persons in the age group from 20 to 24 years—numbered 11,560,000 in 1940 as compared with 10,870,000 persons of both sexes in the same age group in 1930. The number of persons most likely to marry in the latter part of the present decade—persons who were 14 to 19 years old in 1940—numbered 14,760,000 as against 13,930,000 in the same age group ten years before.

"From 1950, however, the aging of our population will have an adverse effect on the demand for homes because a progressively smaller number of persons will reach marriageable ages—a result of the declining birth rate."

This phenomenon of an "aging population" may affect the housing situation materially in other ways, the Review warned. Census figures show that the population of the United States contains a growing proportion of older people and a smaller proportion of younger people. The Review said:

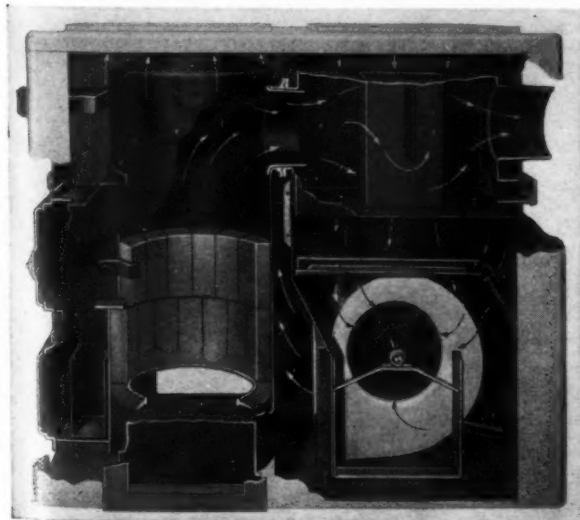
"The gradual aging of our population, due to both lower birth rates and improving mortality rates, will undoubtedly have important effects on the types of living quarters required. Unless the combination of two families in one household—retired parents living with their children—becomes more frequent than it is today, we may expect a rising demand for small dwelling units to house the older people.

"The number of retired persons seeking accommodations away from the hustle of the city, in areas of favorable climate and low living costs, will vastly increase. This in itself will tend to restrict the growth of cities and to hasten the development of resort areas."

### Stoker Furnace Air Conditioner

THE Round Oak Company, Dowagiac, Mich., has announced a new SPX stoker furnace designed exclusively for stoker operation, which supplies a generous flow of warm air to every room in the house and maintains a constant temperature automatically; it is an attractive package unit, much smaller than the average stoker furnace, and is completely enclosed in a blue Hammerloid casing. It is available in three sizes with B.t.u. bonnet ratings of 118,000, 153,000 and 188,000, respectively. A quiet blower provides uniform air circulation and complete ventilation; automatic humidifying gives the warm air the necessary moisture for healthful living; efficient filtering assures cleaner air, removes dirt, dust and pollen.

The Round Oak SPX consists of a heavy, copper-bearing steel combustion chamber and large baffled heat exchanger, electrically arc welded. It has patented Round Oak clinker chute and receptacle, convenient for removal of any clinker formation that develops in stoker operation, and is built with side extension for stoker on either left or right, for easy installation in practically any location. Although the complete unit is designed especially for use with the Round Oak stoker, any other make of standard stoker may be used.

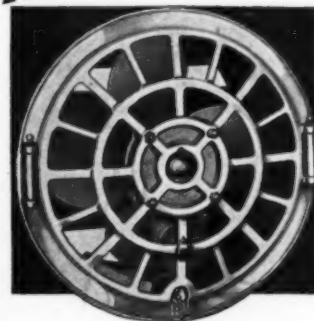


STOKER furnace designed exclusively for stoker operation.



**VICTOR In-Bilt**  
SAYS:  
"BUILDERS CALL ME  
AN ACE  
IN THE HOME"

Builders, when asked to "show" their "hand," always point me out with pride. And no wonder! I make a home more pleasant, more liveable. I keep rooms clean and fresh by removing stale odors, fumes, and smoke. No home without me can be truly modern.

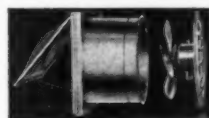


THE *Deluxe*

The perfect ventilator. Quality built. 3-speed control, hinged grille for easy cleaning, weather-tight shutter. Quiet. Ornamental finish in Silchrome and polished aluminum. Many other models at popular prices.

See complete line. Write today for free catalog. Address

VICTOR ELECTRIC PRODUCTS, INC.  
Dept. 1B-215, 2950 Robertson Ave., Cin'ti, O.



Victor In-Bilt's two-unit construction assures quick and easy installation.

## VICTOR In-Bilt VENTILATORS

NATIONAL ADVERTISING OF  
THESE DOES NOT PUT YOU  
"ON THE SPOT"

YOUNGSTOWN PRESSED STEEL KITCHENS



A typical YPS Kitchen installation.

Enameled steel cabinet sink, base and wall cabinets.

When one of your clients points to an elaborately illustrated idea in a National Advertisement and blithely says "Gimme"—it's pretty tough to explain that the beautiful dream picture is 'way beyond the contemplated cost of this job.

YPS Kitchens are nationally advertised; but due to mass-production methods your clients can have an ensemble of these permanently beautiful, enameled steel cabinet sinks, base and wall cabinets at a price they can afford; in fact, at about the price of a good refrigerator

MAIL  
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YOUNGSTOWN PRESSED STEEL DIVISION, Dept. 105  
Mullins Manufacturing Corporation, Warren, Ohio.

AB-541

Please send me complete information on the YPS plan for my territory.

Name

Address

City

State

## WOOD MANTELS *In authentic Period design including Modern*



Our catalog shows more than sixty genuine wood mantels, authentic in design and built by master craftsmen. Prices are extremely reasonable, ranging from approximately \$16.00 for the simple designs to proportionate costs for elaborate hand-carved models. Catalogs will be gladly mailed without cost to builders and contractors. Others please send 15c to cover mailing. Write for catalog today.

**THE BRECHER COMPANY** 441 W. Jefferson St.  
Louisville, Kentucky

## HONOLULU SAYS:



## "It's NEW LONDONER HOLLOW-CORE FLUSH DOORS"



When you build or remodel a home be sure to install New Londoner Hollow-Core Flush Doors. This is the "climatized" door, built to resist weather changes everywhere. The patented construction used in all New Londoners guarantees a door free from dimensional distortion.

You should have a copy of our booklet, "Open for Inspection" which explains graphically why your choice of New Londoners will be a wise one. Send for your copy now.

**AMERICAN PLYWOOD CORPORATION**  
NEW LONDON, WISCONSIN

## PRACTICAL JOB POINTERS AND BUILDING DATA

### "Case Hardened" Concrete

**A**BSORPTIVE form liner is rapidly being adopted for concrete wall construction where the attractive appearance of uniform, pit-free surfaces is desired. Celotex absorptive form liner recently was used for this purpose in the construction of the new Florence Hotel at Missoula, Montana.

Concrete placed in forms using absorptive form liner has been dubbed "Case Hardened." By removing free water from the mix and eliminating bubbles by permitting direct escape of air, absorptive form liner creates an unusually dense, hard "shell" which blends into the core to a depth of 1½ inches.

Absorptive form liner was developed in co-operation with the Bureau of Reclamation to meet a purely utilitarian need for smooth, dense, abrasion-resistant concrete surfaces, free of pits and voids. In achieving this end, added beauty in concrete construction has been made possible.

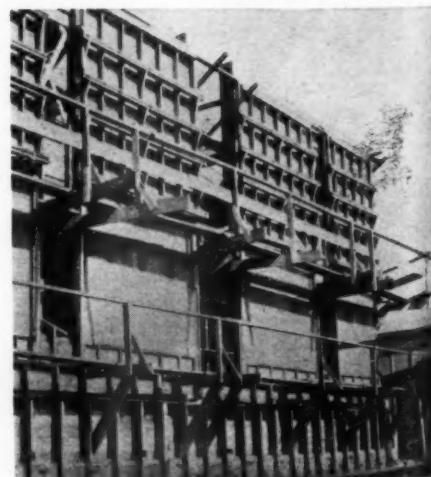
During the search for a suitable material, fibre insulation board suggested itself as the probable answer. Exhaustive tests demonstrated that this economical material when properly treated possesses the necessary absorptive qualities and adequate aspiratory capacity.

However, in its regular form, the surface of fibre insulation board, bonded with the hardened concrete. For more than a year Celotex research department worked with the Bureau to develop the specially treated surface which gives the required finish and is free from sticking—a surface that does not impair absorptive ability, yet comes free when forms are removed.

CELOTEX Liner in a form for construction of Florence Hotel, Missoula, Mont.



SHOWING the smooth surface of concrete, resulting from the use of Celotex Absorptive form liner on walls.





## Old Sol's Energy Trapped to Provide Free Hot Water for Modern Florida Homes

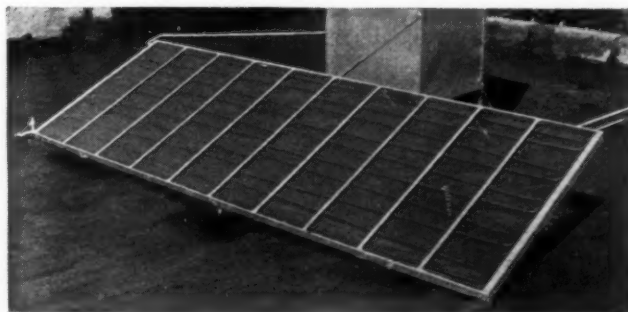
IN many parts of the South the use of solar water heaters to provide free domestic hot water from the heat of the sun has been greatly increasing. It is now customary to equip the storage tank with an electric booster so that on days when the sun doesn't shine, electricity will come into play and bring the water to the desired temperature.

The popular type of solar water heater consists of a metal frame containing copper tubing backed by some form of reflecting metal. It is usually customary to enclose the frame in glass, and some of the more recent devices are covered with two layers of glass with an air space between and are thereby rendered proof against freezing. The frame is usually placed on the roof or in some exposed area where it gets the direct heat of the sun all day. As the sun hits the water in the frame it circulates through the coils and passes to a storage tank, frequently located in the attic. Recently, many contractors have been building the storage tank into the chimney, alongside the flue.

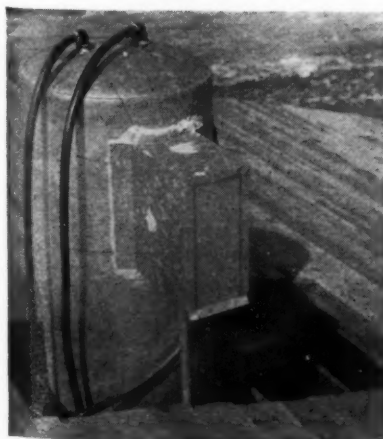
The heat of the sun on the glass-enclosed frame is so intense that the water rises almost to the boiling point. Most of the year an ample supply is provided at no cost whatever. On the few days that the sun doesn't shine, the electric booster comes into play.



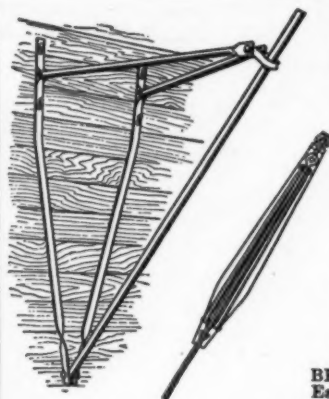
POPULAR Miami Shores home, with solar water heater frame on roof and water tank concealed in chimney.



CLOSEUP of solar heater frame, which has copper coils enclosed in glass and backed with reflecting mirror. Intense heat from sun provides ample supply for home.



SOLAR water tank is built into chimney by Builder R. L. O'Dell. Electric booster unit heats water when sun doesn't shine.



## CUT COST OF SCAFFOLDING IN HALF

RELIABLE Steel Scaffold Brackets can be used on wood or stucco with perfect safety. Remember: A safe workman is a good workman.

BRACKET FOLDS compactly. Easy to remove and erect on another job. Far less bulky to handle.

## Speed Up BUILDING and PAINTING

In the last 30 years thousands of Builders and Painters have PROVED that Reliable Scaffold Brackets cut scaffolding costs in half, last for decades and are many times SAFER. RELIABLES are easy to erect and remove—leave no holes to be plugged. Amazingly superior in every way to wooden scaffolding. You owe it to yourself to know all about these remarkable brackets.

Satisfaction Guaranteed or Money Back

WRITE TODAY for complete literature.

RELIABLE JACK CO., 1401 W. 2nd St., Dayton, Ohio

## RELIABLE SCAFFOLDING BRACKETS



## G-E HOME WIRING Will Help to Sell Houses

Your customers will like G-E Home Wiring because it will enable them to get efficient and convenient service from electrical appliances. It assures plenty of outlets, large enough wire and convenient circuit control.

See the nearest G-E Merchandise Distributor for further information or mail the coupon for free manual and for consumer booklets.



General Electric Co.  
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Bridgeport, Conn.

Sirs: Please send me the G-E Home Wiring Handbook and \_\_\_\_\_ copies of the consumer booklet, "The Poor Wife's Revenge."

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Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

GENERAL  ELECTRIC

## ROUND OAK FURNACES



**FOR ALL TYPES OF HOMES  
USING ALL TYPES OF FUEL**

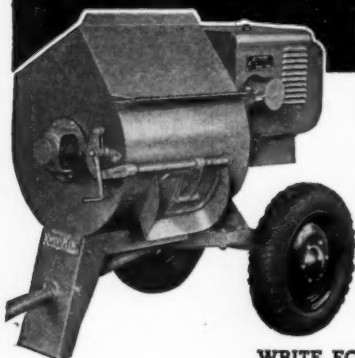
**I**T IS EASY to understand why so many prominent builders recommend and specify Round Oak exclusively. They appreciate the value of this famous name... and no matter what types of homes they build or what type of fuel is preferred, there is always a Round Oak heating and air conditioning unit (backed by an iron-clad guarantee) to meet every requirement. Typical of Round Oak's constant advancement is the new SPX Stoker Furnace and Air Conditioner illustrated above. Write for the complete facts today!

### ROUND OAK COMPANY

*of Dowagiac, Mich.*

STOVES . RANGES . FURNACES . OIL BURNERS . AIR CONDITIONERS . STOKERS

## NON-TILTING PLASTER-MORTAR KWIK-MIX 6-P

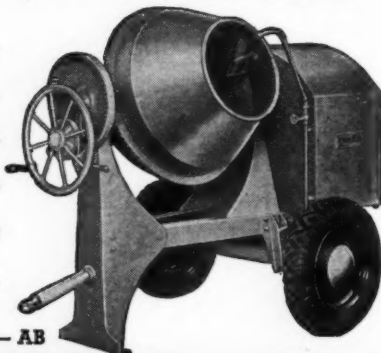


Fast discharge — 7 seconds — no tilting necessary — weighs only 850 pounds — air-cooled engine — V-belt and worm drive.

WRITE FOR BULLETIN NP — AB

## 3½-S TILTING KWIK-MIX

Side discharge — anti-friction bearings — welded construction — discharge either side — spring mounting.



WRITE FOR BULLETIN SD — AB

**KWIK-MIX CONCRETE MIXER CO.**  
PORT WASHINGTON . . . WISCONSIN

## Shields to Keep Out Termites

**T**ERMITE shields, scientifically designed and correctly manufactured, offer the most efficient means for preventing subterranean termite entry into buildings. Authorities agree that, in areas where termites are a problem and inspection and proper construction cannot be relied upon, satisfactory control of these insects and prevention of damage by them to a structure and its contents may be had with the proper installation of adequately designed metal shields.

Subterranean Termites, or "white ants," live in underground colonies. They are blind, shun the light and conceal themselves in their shelter tubes built on the surface of a material, or in runways tunneled through a material. These passageways form a means for termites to reach their food supply when it is not in contact with the ground.

All cellulose materials and many others may be eaten or attacked by termites. The use of treated wood, concrete, brick, steel, or tile, does not of itself insure against these insects entering a structure. It is the method of construction that offers an effective safeguard against termites.

In order to live, termites must have moisture. The home of the termite is in the ground where it finds an unfailing source of moisture and shelter. *Obstruct the ground contact and you stop the termite.* This is readily accomplished by termite shields installed in the foundations.

Termites are not brought into a building in either new or old lumber.

Lumber used in buildings properly constructed is in no danger of being damaged by termites.

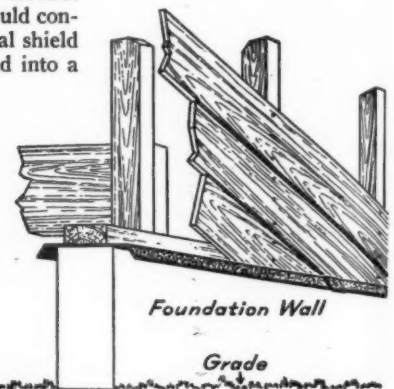
Years of research and service records have proven that termite shields, to be effective, should consist of a rust-resisting metal shield firmly inserted and pointed into a



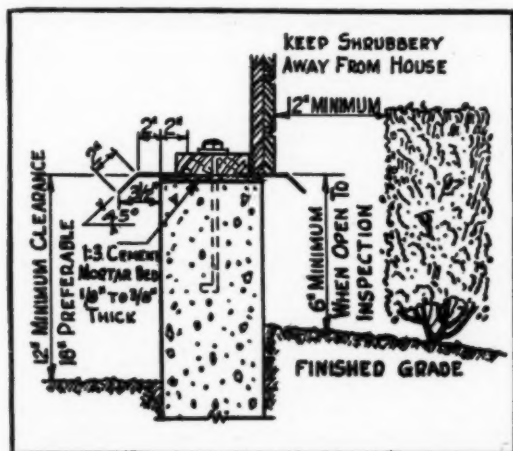
**TERMITE Shelter Tubes Built on Surface of Concrete Wall**

(Photograph courtesy U. S. Bureau of Entomology and Plant Quarantine)

**RIGHT, Termite Shields on Top of Foundation Walls Prevent Entry of Subterranean Termites to Superstructure; BELOW, Teco Standard Termite Shields — Pan and Strip Type.**







**TECO Termite Shield Capping Concrete Wall**

(2 6-in. strip shields or one pan strip shield). Horizontal extension on shield for exterior of wall not required when wall is open to occasional inspection

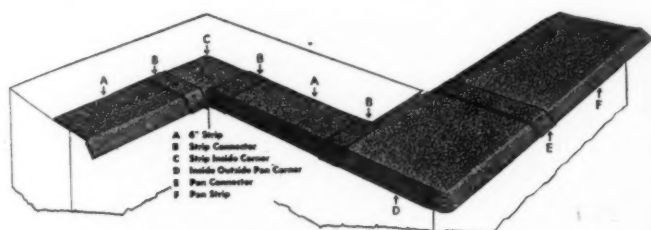
masonry joint, or placed under the sill. The shield should project horizontally at least 2 in. beyond the face of the wall, and then an additional 2 in. turned downward at an angle of 45°. All joints should be "termite-tight."

Pan type metal shields which extend across the entire width of masonry foundation walls or piers should be used when each face is not exposed to easy and frequent inspection, as under a house, behind heavy shrubbery, etc.

When one face of masonry wall is open to frequent inspection, a strip type shield on the face of the unexposed wall may be used when foundation wall is solid or cellular wall is well capped.

Termite shields thus installed, at a small cost, will provide a constant protection against termite attack.

Neat appearing and successful termite protection is largely dependent upon proper manufacture and installation of shields. Shields that are of odd sizes, with wavy edges, and which are improperly installed, are unsightly. Lapped shield joints only are worthless—soldered joints, except in special cases, are unreliable.



NO SOLDERING  
JUST SLIP IN

**TECO Termite Shields on Top of Foundation Wall;**  
**RIGHT, detail of Teco Slip-On Connector.**

Note how pan and strip shields are easily fitted together with Teco shield connectors



Adequate projection of shield beyond wall or pier is most important.

Die-pressed TECO termite shields, when installed according to directions of the manufacturer, The Timber Engineering Co., 1337 Connecticut Ave. N.W., Washington, D.C., will meet the most exacting specifications, and the requirements of Building Codes. Teco termite shields meet the requirements of the Bureau of Entomology, U. S. Department of Agriculture.

All TECO shields are precision manufactured by die-press method. (Continued to page 132)



## IT PAYS TO SELL "REO" CLUSTER METAL SHINGLES

Reo Cluster Shingles combine the protection of high grade, interlocking, galvanized steel sheets with the attractive appearance of individual shingles—all at low cost, with liberal margins of profit for dealer and contractor. Easy to install. Storm proof and lightning proof. Nails covered and protected.

Reo Shingles installed in 1911 are still giving perfect satisfaction.

Dealers and builders for three generations have made money with Reo Shingles. It will pay you to investigate.

Write for Catalog 95.

### THE EDWARDS MANUFACTURING CO.

542-562 Eggleston Avenue

Cincinnati, Ohio

**Save**  
**50% OR MORE**  
**OF FINAL COSTS ON**  
**WOOD FLOOR**  
**FINISHING**  
*With*  
**LIGNOPHOL**

**LIGNOPHOL COSTS LESS THAN 1 CENT PER SQUARE FOOT**  
Applied in one application with a long handled brush—reducing labor to the minimum.

**LIGNOPHOL BEAUTIFIES YOUR FLOORS!**

**LIGNOPHOL LEAVES NOTHING TO WEAR OFF!**

Shellac and varnish, surface treatments, wear off!  
Do as thousands of contractors are doing: Enjoy more profits, attain greater job satisfaction and save 50% or more by using LIGNOPHOL to preserve and finish your floors.

**FIND OUT MORE ABOUT LIGNOPHOL**

**MAIL THIS COUPON TODAY!**

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L. SONNEBORN SONS, INC., 88 LEXINGTON AVENUE, N. Y. C.  
Your Name \_\_\_\_\_  
Address \_\_\_\_\_  
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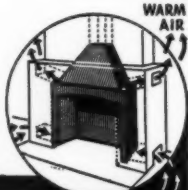
## "The Heatilator" takes all the Guess out of building a **FIREPLACE!**"



... With the double-walled steel Heatilator serving as a form for the masonry, you can build any style of fireplace and be sure that it will work properly . . . **WILL NOT SMOKE** . . . and that it will *Circulate Heat*.

✓ Drop a postcard today for complete information.

HEATILATOR, Inc.  
715 E. Brighton Ave.  
Syracuse, N. Y.



### HEATILATOR Fireplace

## REAL GAS...



### FOR HOMES BEYOND THE GAS MAINS

For over 20 years "Pyrofax" gas . . . supplied by one of the largest manufacturers of compressed gases in the world . . . has brought complete gas service to homes and estates beyond the gas mains. "Pyrofax" gas is *real* gas—not a liquid fuel . . . it burns with a hot, clean flame without soot or odor. "Pyrofax" gas equipment is listed as standard by the Underwriters' Laboratories and the gas is utilized in appliances approved by the American Gas Association.

Send for all the facts on "Pyrofax" gas as well as specification sheets on installation. Write to Dept. A, "Pyrofax" Gas Division, Carbide & Carbon Chemicals Corporation, 30 East 42nd Street, New York City.

# PYROFAX

TRADE-MARK



**SUPERIOR GAS SERVICE**  
COOKING • WATER HEATING  
REFRIGERATION  
BEYOND THE GAS MAINS



## Shields Keep Out Termites

(Continued from page 131)

ods which insure uniformity of size. Standard sizes and shapes are illustrated.

To provide long life, shields are made of 26-gage, copper-bearing, corrosion-resistant steel, zinc-coated by the hot-dipped process. Shields made of 16-oz. copper are available on special order only.

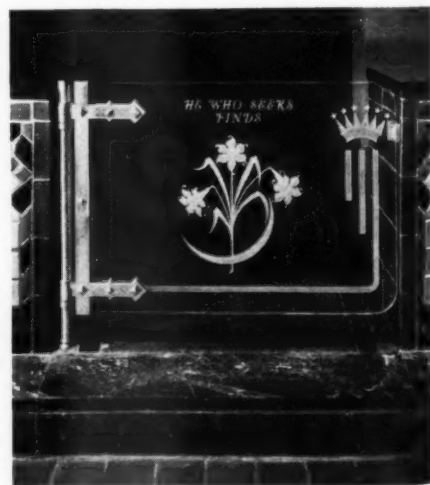
With the Teco shield connector, strip and pan shields are interconnectable and interchangeable—quickly and economically assembled. Special joints and details are easily made. Little labor on the job is required with Teco shields. Strip shields can be used on the walls of any width. Pan strips are for walls of 8-in. width or less.

The Teco patented shield connector makes tight joints between lengths of shields simple and easy without the need of tools. Broken joints due to expansion and contraction of metal are eliminated. Teco "Wall-Line Guide" feature guarantees easy and exact placing of shields on walls or piers.

## Plexiglas Used for New Altar Gates

A NEW type of altar gate, made of single sheets of Plexiglas and carved in a variety of symbolic designs, has appeared for the first time in an American church. It was designed by Henry J. McGill, a New York architect, and fabricated by N. Y. Art Iron Works. Plexiglas is a product of Rohm & Haas Co., Philadelphia.

The new gates, shown here as installed in the Church of the Good Shepherd, Brooklyn, combine light weight and resistance to breakage with an ability to take delicate bas-relief carvings. Less than half as heavy as plate glass and even clearer, the Plexiglas gates are practically unbreakable. They were carved by a special technique developed by the fabricator especially for the new material which can be drilled, sawed and sanded like hardwood and has the peculiar property of transmitting light through polished sections and diffusing it at roughened or carved edges. Mounted on satin finished brass hinges of ball-bearing type, the doors are three-quarters of an inch thick and are carved to a maximum depth of one-quarter inch.



CARVED Plexiglas gate in Brooklyn, New York, church.

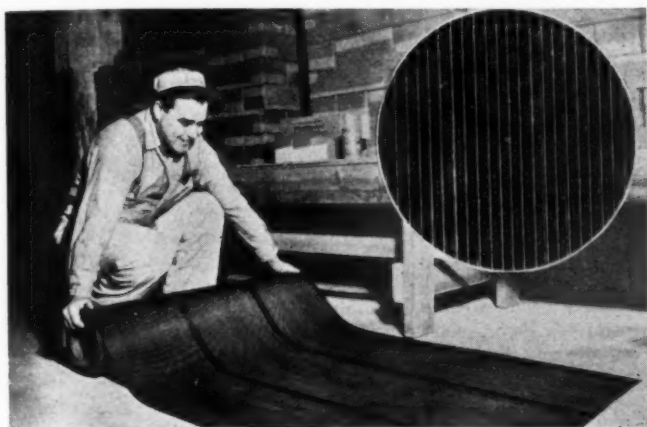
## New Majestic Outdoor Fireplace Unit

THOSE WHO wish to build an outdoor fireplace, for either residence or park use, will be interested in a new fireplace unit that offers a stove-type top, provided with two holes with lids to fit, made by the Majestic Company, Huntington, Ind. It is properly proportioned for efficiency and may be built into a fireplace of any exterior design. Although inexpensive, it is durably built. It is constructed of angle iron with doors and frames of cast semi-steel. Joints are electrically welded. The two doors are 10" wide by 8" high, the top is 12" wide and 24" long. The bottom grate is made up in two sections, measuring 12" square. The frame is arranged with lugs, so that the bottom grate may be placed at different levels for burning either wood or charcoal. The overall dimension is approximately 20" x 26" x 15". Shipping weight is approximately 65 pounds.



## New Corrugated Floor Runner

A NEW type of floor runner that is non-skid, resilient, water-proof and inexpensive is now available in rolls 36" wide and 30 ft. long from The Philip Carey Company, Lockland, Cincinnati, Ohio. It is a composition material with rubber-like appearance. It is ribbed to give a non-skid surface, suitable for use in halls and on floors in theatres, stores, offices, basements, recreation rooms—in model or demonstration homes—or for any floor where an inexpensive and wear resistant, protective covering is required. This runner lays flat, is easily handled and provides a firm footing.



NEW Philip Carey corrugated floor runner.

## Improved Concrete Mixers Announced

A NEW line of Rex Moto-Mixers and Moto-Agitators was recently presented to the concrete industry by the Chain Belt Company of Milwaukee and offers these improvements—faster loading, faster and better mixing, greater carrying capacity, and shorter over-all lengths.

One of the new features of the Moto-Mixer is the no-leak Rex discharge door which is definitely leakproof, maintaining true alignment with the drum at all times. It is operated from the mixer or from the ground by a non-creeping hand-wheel.

These mixers offer the Rex twin clutch transmission wherein one lever controls all speeds from high to low and in between, thus eliminating the need for stopping the drum to change gears. Optional, at a slightly higher cost, are the Rex pneumatic controls which give the driver finger-touch control of drive speeds from his seat in the cab.

The new sizes are the Rex 2 yard Moto-Mixer with a capacity of 104 cubic feet; the 2½ yard with a capacity of 156 cubic feet; the Rex 4 yard with a capacity of 208 cubic feet; the Rex 5 yard Moto-Mixer with a capacity of 250 cubic feet; and the Rex "Metropolitan Special" with a capacity of 270 cubic feet.



REX Moto-Mixer featuring larger drum volume, larger drum diameter, and shorter over-all length.



## MORTON STEEL KITCHENS MERIT YOUR ATTENTION, TOO!

Get the facts on why these modern kitchen cabinets appeal to builders, contractors, architects. The line is complete; it has all types of kitchens including porcelain enamel cabinet-sinks, continuous sink-tops and deluxe models. We'll gladly send details; write our Building Division for **Bulletin AB-415**. MORTON offers deluxe quality at economical prices. There's a MORTON cabinet combination for any size or floor plan. Also: low-cost **PACKAGE ENSEMBLES** for 6, 7, 8, 9, 10-ft. wall areas, featuring the Prefabricated Linoleum Continuous Sink-Top. **YOU GET MORE WITH A MORTON:** Modern design, all-welded steel construction, white enameled,—and many other features.

REPRESENTATIVES are invited to inquire about open territories.

**MORTON MANUFACTURING CO.**

5105-43 WEST LAKE STREET, CHICAGO

EST. 1901

Send for Bathroom Cabinet Sales Plan, too!

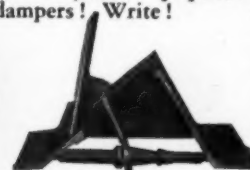
## Majestic NEW FIREPLACE DAMPER



A new high in value! Features, design, quality you'd never expect in a damper priced so low! It's the new Majestic STANDARD—with a revolutionary new poker control that works so easily and is so nearly trouble-proof that patents have been applied for! Extra wide, extra strong backledge and built-on lintel. Heavy, steel-plate valve! A fitting companion to Majestic's popular QUALITY dampers! Write!

### INGENIOUS NEW POKER CONTROL

PATENT APPLIED FOR  
Always Works Right  
Always Works Easily



THE MAJESTIC CO.

800 ERIE STREET, HUNTINGTON, INDIANA



Extensive Line of  
Quality Building Necessities



## WITH THE *Payne* DUPLIX FURNACE

Features sell homes. And a PAYNE Duplex Furnace is a "double-barreled" selling feature... in customer acceptance, in its exceptional economy. ★ Pre-sold by national advertising, the PAYNE Duplex is engineered for lasting, trouble-free service... provides two-way comfort with one-way cost. Compact, requiring no floor space, it fits beneath room partition... cuts installation costs. A flexible, fuel-saving furnace that helps turn "warm" prospects into soundly sold clients! ★ For this or any heating equipment, first investigate PAYNEHEAT at your local dealer, or write us. You can be doubly sure of PAYNEHEAT. Double-tested by A.G.A. and PAYNE Testing Laboratory.

**PAYNEHEAT**  
Payne FURNACE & SUPPLY CO., INC.  
BEVERLY HILLS • CALIFORNIA

- Forced Air Units
- Modern Consoles
- Floor Furnaces
- Duplex Furnaces
- Zoneair Units
- Gravity Furnaces

## TRAIL-SMITH

7-S or  
10-S

Spring-mounted axle — Roller bearing auto type wheels — Oversize low pressure pneumatic tires — Automatic skip vibrator — Enclosed gear reduction — Multiple V-belt drive — Vertical siphon-type tank.

**BUILT TO "TAKE IT"** — either on the job or traveling between jobs. Compact. Lightweight. Roller bearings throughout. Also 4 wheel end or side discharge models. Other sizes 2½-S to 112-S. Write for literature.  
**THE T. L. SMITH COMPANY**  
2849 N. 32nd Street Milwaukee, Wis.

Tows behind car or truck at fast driving speeds!



MIXER MANUFACTURERS FOR MORE THAN 40 YEARS

## How to Prevent Fires

### Palmolive Building Institutes Half Dozen New Fire Precautions After Observing Neighboring Fire

**M**INOR fires and accidents—even in other buildings—can frequently suggest new fire and safety measures, according to the management of Chicago's 37 story Palmolive skyscraper.

Regular inspections to uncover new fire hazards, and special checkups when other fires suggest a new cause, have played an important role in the excellent fire prevention record the Palmolive building has maintained since its erection in 1927, according to Ross, Browne & Fleming, managing agents.

A recent small fire in the America Fore building, 844 North Rush Street, Chicago, brought to light a new series of fire and water damage precautions that were immediately placed into effect at the Palmolive building.

Because of close co-operation between the operating staffs of the two buildings—four blocks apart and both operated by Ross, Browne & Fleming—more than a dozen Palmolive building electricians, and other technicians were on hand to help curtail damage at the America Fore building within 20 minutes after the first alarm.

Smoke from the shop of the game supplier where the fire originated drove tenants from the building, but the major damage came from water, which severely taxed the single pump in the basement.

To avoid any possibility of the heavy smoke caused by celluloid and acetate fires, the Palmolive management immediately ordered a thorough check of the photographic studio, of the 15 advertising agencies in the building, of art studios, letter shops, and the valet service to locate any possible sources of irritating small fires.

The photographic darkroom was equipped with a fireproof safe for the storage of fresh and developed film. Fluid for alcohol duplicators and stocks of typewriter cleaning fluid in the quarters of two dozen tenants were placed in fireproof cans.

Several of the advertising agencies have equipment for making their own "acetate" recordings of radio programs. In the recording process the cutting diamond cuts a fine thread of cellulose acetate off the blank records. This fine thread is highly inflammable. To guard against possible small fires, the building ordered foot-operated fireproof containers for the disposal of the thread, and instructed agency personnel to avoid smoking while recordings are being made.

Biggest precautions were taken in permanent installations to minimize water damage to the building switchboard and elevator equipment in the basement. Holabird and Root, architects of the building, were asked to design metal hoods for the switchboard and other equipment that would prevent water from dripping on the wiring in the event of a fire.

Tarpaulins for further protection against water damage to electrical equipment were spotted at strategic locations. Thresholds for doors leading into the switchboard room were raised and covered with ramps, so that no water dripping from hoses could flow into the electrical equipment unless the level should rise more than four inches.

Original plans for the building had provided for duplicate sump pumps to handle any excessive flow of water in the elevator shafts and the sub-basements. Extra provisions were made for periodic checks of both pumps, and for completely separating the current feeds to these pumps from other circuit-breakers at the main switchboard, so that they would function despite any cutoffs of electricity.

These extra precautions were made to minimize any possibility of disruption of elevator service in an emergency—an important factor in both fire prevention and safety engineering.

Already in force was an annual cleaning of grease from the flues of the kitchens of Huyler's restaurants in the building—a precaution that has prevented any flue fires in the building's 13 year history—despite the fact that nearby hotels and office-building restaurants have experienced a number of fires over the same period.

The restaurant was asked to install expensive filtering system in their kitchens that would reduce the amount of grease carried up the flues by approximately 60 per cent.

Every measure taken was an extra one, not required by underwriters, but added insurance against fire and accident to tenants or building personnel.



**Concrete Floors—**

(Continued from page 85)

**IV. Cast-in-Place Concrete Slab**

1. A reinforced concrete slab of thickness shown on plans shall be cast in place over the joists. Joist heads shall be embedded into the concrete slab to a depth of  $\frac{1}{2}$  in. Minimum thickness of concrete over head of joists shall be  $1\frac{1}{2}$  in. Concrete shall have an average compressive strength of not less than 3,000 lb. per sq. in. at age of 28 days.

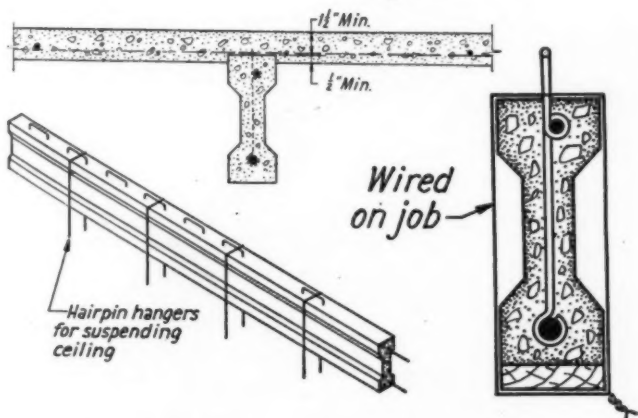
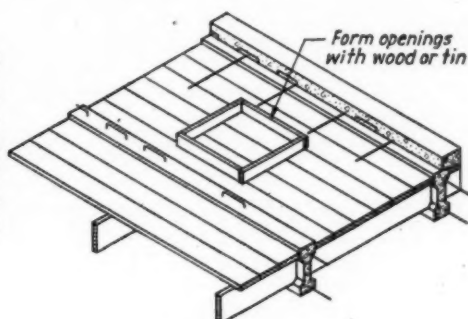
2. Reinforcement of size and spacing shown on plans shall be placed by the contractor. Dirt and harmful rust shall be removed from reinforcement before it is placed. A minimum of  $\frac{1}{2}$ -in. coverage shall be provided.

3. Contractor shall provide for openings in the slab required by mechanical trades (plumbing, wiring, heating, etc.) as shown on plans.

4. Contractor shall provide finish on concrete slab as shown on plans.

(NOTE: Specify a smooth troweled surface finish for overall carpeting or for floor finishes laid directly on the concrete slab in mastic.)

**RIGHT: Method of forming openings in slab. Below: Section through joist and slab, and two methods of attaching suspended ceilings.**



5. Concrete shall be moist-cured by an approved method for a period of 5 days. Forms and shoring shall be left in place until end of curing period.

Supplements (Select as applicable to job):

A. Hairpin hangers of No. 12 gage rust-resisting wire for suspended ceilings shall be dropped over joists at 16-in. intervals as shown on plans.

B. Wood sleepers, screeds or nailing blocks for attaching flooring shall be provided as shown on plans.

C. Where joists are to be exposed contractor shall remove any mortar which has leaked from the forms onto the joists.

D. A skin coat of plaster shall be applied to underside of slabs between joists to bring same to a smooth true surface.

E. Concrete slab shall be cast on plywood forms or equal.

(NOTE: Specify plywood forms or equal when smooth exposed ceiling finish is desired. For information on forms refer to Portland Cement Association publication, "How to Design and Build Precast Joist Concrete Floors.")

F. Paper for lining sheathing forms where specified shall be impregnated and surface-glazed building paper weighing not less than 9 lb. per 100 sq. ft. or equal.

G. (For addition to electrical contract if conduit is placed in slab.) Contractor shall place conduit, outlet boxes, etc., on forms as shown on plan after reinforcement has been set.

H. (To be included in heating and plumbing contract.) Contractor shall locate and specify sizes of openings required in floor slab for vertical pipe runs.

**Sterling concrete CARTS**

No. 12 Cart

*Easily*  
WHEELED*Easily*  
DUMPED

**POPULAR** features of this Cart are: 4-ply, 5.00" x 21" Pneumatic Tires; Roller Bearing Wheels; 12 Gauge Welded Tray with Heavy, Continuous Tray Rod; 9 Cubic Feet Level Capacity; Heavy, Flanged Legs, Welded to Tray; Alloy Steel Underslung Axle.

**STERLING WHEELBARROW CO.**  
MILWAUKEE, WISCONSIN

*Specify*  
**TECO****FOR MODERN  
HOME PROTECTION****TERMITE  
SHIELDS**

**TECO** Shields are designed on a new scientific principle that effectively breaks the termite's ground connection with the building in termite infested areas.

TECO's scientific construction eliminates useless lapped joints; breakable soldered joints; expensive locked joints. The interchangeable TECO connector joint is termite-tight and can be quickly assembled by anyone.

Mail coupon for full facts on TECO Termite Shields.

**TIMBER ENGINEERING  
COMPANY, INC.**

Dept. H-5, 1337 Connecticut Avenue  
Washington, D. C.

Timber Engineering Company, Inc.  
Dept. H-5, 1337 Conn. Ave., Wash., D. C.  
Please send us your two new booklets on  
how to prevent Termite Damage.

Individual \_\_\_\_\_  
Firm \_\_\_\_\_  
Street \_\_\_\_\_ State \_\_\_\_\_  
City \_\_\_\_\_

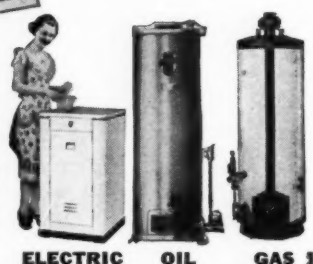
**WHY GUESS ABOUT  
Water Heating?**

**HOTSTREAM**  
41 CATALOG gives  
you the complete  
"True Story!"

Don't overlook the all-im-  
portant water heating sys-  
tem in your residential  
buildings. Hotstream will  
help you specify and in-  
stall exactly the right unit.

THE HOTSTREAM HEATER CO.  
1007 GRAND AVE. • CLEVELAND, OHIO

**235** styles and sizes of Hot-  
stream Water Heaters—repre-  
senting the most complete line  
in the world—are described in  
this book—the only one of its  
kind in the industry. Get your  
copy and refer to it whenever  
there is any question about wa-  
ter heating.



**ELECTRIC OIL GAS**

**THE HOTSTREAM HEATER COMPANY**  
8007 GRAND AVENUE • CLEVELAND, OHIO

## Silent Screen and Combination Doors Round Out Your Building Service

**No. 44**

**NORTON SCREEN DOOR CLOSER**

In selling homes, it's the little things that count. Now, at very little cost, you can complete your "Package" homes with the latest in screen door control. The new Norton Model 44 quickly, quietly, and surely closes screen and combination doors with absolutely no slam. It's the first and last thing your prospects will notice as they enter and leave your home. Round out your building service by equipping all your new homes with this most efficient and practical method of screen door control. In line and finish, Model 44 harmonizes with any type architecture and decoration. It is built "to last", by the world's largest and oldest exclusive manufacturer of door control devices. Write for new illustrated literature.

**Building Supply Dealers: Consult Your Jobber or Write Us**

**NORTON DOOR CLOSER COMPANY**

*Division of The Yale & Towne Mfg. Company*

2904 N. Western Ave.

Chicago, Illinois



SCENE AT WILMOT showing curved streets and attractive park-  
way that add to pleasing effect.

## How New Haven Builders Meet Home Shortage

(Continued from page 69)

the project, with winding roads and parkways and irregular, interesting spacing of houses. This type of layout proved a vast improvement over the old-fashioned gridiron plan and did much to get away from the monotony that so frequently accompanies low cost home developments.

Outstanding in the reasons for the success at Wilmot is the standardization of plan and construction that was achieved without monotony of design. Every one of the 72 Wilmot houses is built on a 24' x 30' foundation, and every one has the same roof pitch. Yet through three principal variations in plan on this basic 24' x 30' foundation, a large number of exterior treatments were possible. The three basic plans illustrated herewith are worthy of careful study, and Architect Olson is to be congratulated on the fashion in which he achieved variation in design without expensive changes in plan.

The William T. Beazley Company, prominent New Haven realtors, not only handled the sales and the preparation of advertising, but also arranged the financing for the project through the Connecticut General Life Insurance Company. They were able to arrange 4½ per cent 25-year loans. In advertising and pro-

*It is easy to buy*  
**A HOME AT WILMOT**

PRICE Now \$5,150 DOWN PAYMENT \$550

**TOTAL MONTHLY PAYMENT**

**\$36.<sup>36</sup>**

Includes . . .

INTEREST  
TAXES  
INSURANCE  
and  
REDUCES THE MORTGAGE  
\$19.33 each month

ONE MONTHLY PAYMENT  
LIKE RENT  
DOES THIS:

Pays . . .	
Interest, Amortization of Mortgage, etc. . . . .	\$25.58
Taxes (Estimated) . . . . .	8.25
Fire Insurance . . . . .	.62
F. H. A. Insurance . . . . .	1.91
<b>TOTAL MONTHLY PAYMENT</b>	<b>36.36</b>
<b>AVERAGE MONTHLY SAVING (Reduction of Mortgage)</b>	<b>15.33</b>
<b>NET MONTHLY EXPENSE</b>	<b>21.03</b>

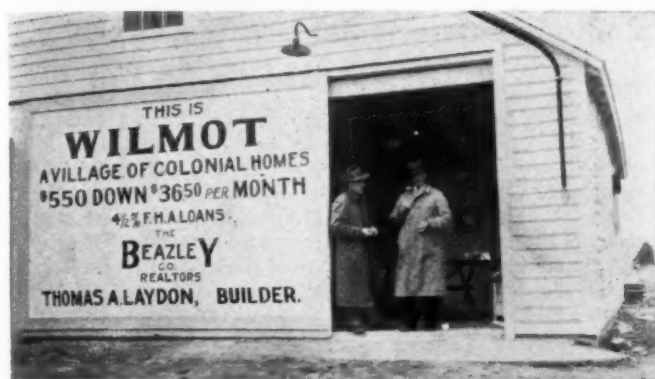
**COMPARE**  
This net monthly expense  
**WITH THE RENT**  
you now pay!

**CAN YOU AFFORD TO PAY RENT**  
... when it costs less to buy a home?

Due to the impending rise of building costs, the price is subject to increase without notice. Take advantage of the present low price—and protect yourself against rent increases. Order your home this week!

**IT IS CHEAPER** to buy a home at Wilmot than to pay rent, builders explain to their customers, in the above folder.





THIS BIG sliding door of the builder's office is used to advertise the easy financing terms at Wilmot.

motional literature Beazley featured the financial independence that home ownership brings. He stressed the fact that the \$36.36 total monthly payment was far less than the buyer would have to pay for suitable rental accommodations, and that at the same time \$15.33 of that amount each month was being applied to reduce the mortgage.

Although the selling prices of the Wilmot houses are low, the construction quality is high. Included in the specifications are: York boiler-burner unit with year-round domestic hot water, Curtis Silentite weatherstripped windows, Curtis 6-panel Colonial doors and trim, Overhead garage doors, Standard plumbing fixtures, 3 coats of plaster on Rocklath, copper flashings, leaders and gutters, mineral wool insulation, Armstrong linoleum, Sargent hardware, Chi-namel paint.

### Newlyweds Like It

One of the Wilmot buyers to attract much attention was a young pair of newlyweds, Mr. and Mrs. C. Malcolm Johnson. They looked all over the New Haven vicinity and found that it would cost them at least \$35 for a small four-room apartment. They decided to start out right by having a brand new house into which to put their brand new furniture. They were much impressed by the model house they looked at, but before buying talked it over with Mrs. Johnson's brother, who had had experience as a carpenter foreman. He examined the model house and several of the houses under construction and turned in a good report, so the Johnsons bought.

One of the features that particularly appealed to them was that they could start out in a small way in one of the Wilmot houses but expand later to meet their needs. They bought the house with the second floor unfinished, but the risers are all in so that later on two additional rooms and bath can be added.

In arriving at their "overall" budget the newlyweds were able to figure on the following:

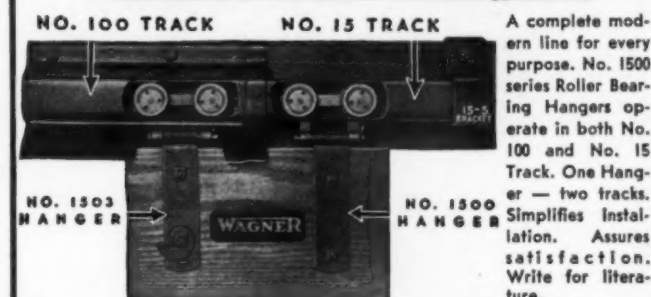
Monthly payment for principal, interest, taxes and insurance, \$36.36; oil \$6.70; electricity, \$1.75; water, \$1; gas, \$1.50. Total operating cost, \$47.31.

Thus, for less than \$50 a month the newlyweds are able to live in and own a home that will be far better than anything they could afford to rent, and at the same time they will be building up an equity that, before they know it, will be worth a great deal.



ANOTHER exterior variation in Wilmot home, near New Haven, Conn., built according to the standard 24' x 30' basic foundation plans as shown on pages 68 and 69.

## WAGNER TRACKS AND HANGERS



A complete modern line for every purpose. No. 1500 series Roller Bearing Hangers operate in both No. 100 and No. 15 Track. One Hanger — two tracks. Simplifies installation. Assures satisfaction. Write for literature.

## NEW FOLDING ALL-METAL SAW HORSE LEGS!

One of the most USEFUL items ever developed for the building industry. These all-metal legs fold for easy transportation—never wear out—set up in seconds with any 2 x 4 or 2 x 6. Save material—save time. Alligator grip holds legs securely. 2 heights—24" and 30". Ideal for temporary tables, stands, counters, etc. Hundreds of uses.



**WAGNER MANUFACTURING COMPANY**  
DEPT. AB-541, CEDAR FALLS, IOWA



*Savings Made*  
**PRE-CUTTING FRAMING**  
*Pay For a*  
**Mall Saw**  
TRADE MARK

Model 100  
Capacity 3 5/8"  
10" Blade

Any builder can save enough time, labor and material pre-cutting house framing members with a MALLSAW to absorb the cost of this money-making tool on the first two jobs. It is adaptable to all types of sawing—will assure accurate cuts, better fitting and a better building. In addition, it can be used to cut metal, cut and score stone, tile, concrete, etc., when equipped with an abrasive wheel. Every model is perfectly balanced with greatest weight on long end of board for safe one-hand use and to eliminate blade binding near end of each cut. There are 7 powerful models with blade sizes from 6 1/2" to 12" and cutting capacities from 1 3/4" to 4 1/2" to meet all requirements at low cost. Write Today for a Free Demonstration—enclose coupon for full information.

**MALL TOOL COMPANY**

7737 South Chicago Ave 100  
Chicago, Illinois

Please send free folder on **MALLSAWS, MALL RADIAL SAW ARM, MALL DOOR MORTISERS, DOOR PLANES and DRILLS.** AB541

Name .....

Street .....

City..... State.....

*Put the difference  
in the Bank!*



Installation time is cut in half on the  
**NEW IVES NON-MORTISE  
DOOR LATCH**

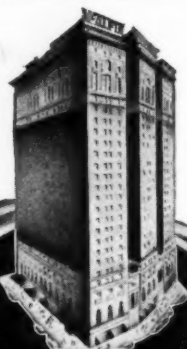
Simply drill one hole for the spindle and notch the stop for the latch case.

For outswinging screen, storm, and combination doors. And remember this—it latches easy.

One of the most popular items in the Ives Line. Sold thru the builders hardware trade.

Write department "A" for specifications  
"Quality Hardware Since 1876"

**THE H. B. IVES CO.**  
NEW HAVEN CONN.



**NEW YORK IS A "GREAT CITY"  
AND THE HOTEL McALPIN  
IS THE FOCAL POINT OF IT!**

When business beckons you to New York—establish yourself at The McAlpin. The City's important buying and selling centers are its next door neighbors.

THE CITY'S FASTEST TRANSPORTATION (including the New 6th Avenue Subway) IS RIGHT AT HAND. ONLY 1 BLOCK FROM PENNSYLVANIA STATION AND EMPIRE STATE BUILDING. B & O MOTOR COACHES STOP AT OUR DOOR.

Single rooms with bath \$3. Double from \$4.50

**HOTEL McALPIN**  
BROADWAY AT 34TH STREET, NEW YORK

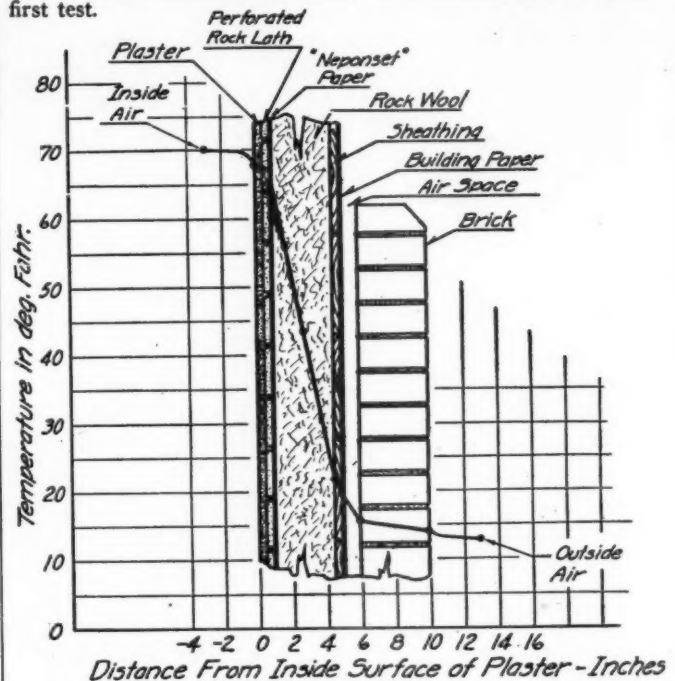
Under KNOTT Management  
JOHN J. WOELFLE, Manager

**Radiator Interests Set Up "Test Home"**

(Continued from page 81)

a clear picture of what happens. These temperatures are obtained by means of thermocouples (in reality, electrical thermometers). More than one hundred thermocouples show the temperatures at nine different locations in the outside walls. At each of these locations are located thermocouples three inches inside the plaster; on the plaster surface; between the rocklath and plaster; in the center of the insulation on the inner and outer surface of the sheathing; on the inner and outer surface of the brick; and three inches outside the brick wall. The temperatures measured with these thermocouples make possible the study of effect of wind, rain, and sunshine, or exposure.

The Research Advisory Committee selected a one-pipe forced-circulation hot-water system, using an oil-burning boiler, for the first test.



**TYPICAL TEMPERATURE GRADIENT THROUGH NORTH  
WALL OF I-B-R RESEARCH HOME**

Radiators are located under windows in keeping with current practice. However, tests may be made later to determine whether other locations may be more desirable.

Sales-minded contractors should take particular note of the compactness of heating installations of this type. Shrewd builders today are seeking ways to increase useful space in a house while reducing cubical contents. Forced circulation hot water systems are the most compact heating equipment that is available. Not only is the boiler small but, when the single pipe of the circulation system is properly installed, it eliminates much of the space required for duct systems.

Boiler efficiency is being carefully studied as well as the effectiveness of the distribution and radiation system. Flow of water through the system, including each radiator, is being recorded. Temperature of water entering and leaving the boiler is also being noted. The amount of fuel oil, the length of the time in which the burner and the circulating pump operate are observed; also the flue gas temperature, the CO<sub>2</sub> content of the flue gas; and the draft.

Thus it is evident that practical data will be obtained to evaluate various elements of hot water systems. In so doing, methods to increase efficiency and economy will be suggested.

The schedule of tests will be determined as the current program develops by the Advisory Research Committee of The Institute of Boiler and Radiator Manufacturers. Serving on this committee are J. P. Magos of Crane Co., Chairman; L. N. Hunter of the National Radiator Company; J. F. McIntire of the United States Radiator Corporation; H. F. Randolph, International Heater Company, Inc.; and S. K. Smith of the H. B. Smith Company, Inc. The program is being conducted under the general supervision of Professor A. P. Kratz and Professor M. K. Fahnestock of the Department of Mechanical Engineering of the University of Illinois.



**Tourist Cottages—** (Continued from page 77)

capacity of the cottage is six people. During the height of the season the rate runs \$2 to \$2.50 per person, and a cottage of this type will consistently bring in \$70 or \$80 a week. During the off season the rate drops to as low as \$1 per person, and, of course, the income is considerably less.

These cottages are built as substantially and attractively as any well-built home. They are of standard frame construction with diagonal sheathing and Western cedar siding. The interiors are attractively finished with decorative insulating board. An attractive touch is given by the use of Johns-Manville white asbestos cement roof shingles.

The plumbing and kitchen equipment are compactly arranged but very complete. The kitchen is entirely electric, featuring a Hot Point range, refrigerator and water heater. The kitchen space provides everything needed for light housekeeping, but it is deliberately kept small to discourage too extensive operations.

The cottages are set on substantial concrete piers, have hardwood floors and are well ventilated and lighted. Mr. and Mrs. Williams report the amazement and delight of tourists when they look at the completely modern electric kitchen and bath and discover that they have all the hot water they want supplied by the electric water heater.

The Williamses felt it was important to get away from the monotony of most tourist layouts by varying the exterior design. This was done, as shown in the accompanying detailed drawings, by minor changes in the gables, by reversing the plan and by variations in the placement of the structures.

Owner Williams selected the name "tourist cottages" because he believes "cabins" denote a less attractive type of building. He and Builder Stone deserve a blue ribbon for creating such thoroughly attractive and well designed cottages which would be an asset to any community.

\* \* \*

**Knoxville Homes Heat Economically**

(Continued from page 67)

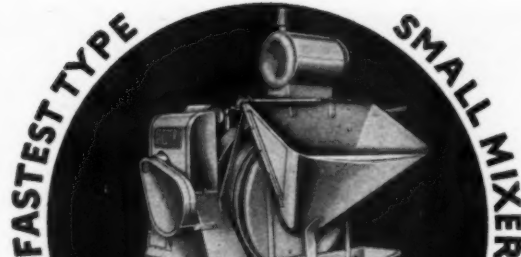
supply plant under one roof, and mass production in subdivisions, which saves costs.

The story of how Fonde uses new methods to produce better value homes was described in the *American Builder* in October, 1938. The same methods have been continued in construction of his latest developments, including smokeless Highland Hills. For instance, crews do certain jobs on each house, one superintendent handling the entire project. All framing is cut from templets with power machinery and window assemblies are made complete at the shop so that it takes only 3 to 5 minutes setting time on the job. Other time and labor saving methods include power mortising of locks and power sanding of trim and doors in the shop, a special stud cutting frame on the building site so that members of the same length could be quickly turned out with an electric hand saw. Also a combination saw and jointer placed in each house when finishing started, with many operations on it, which give better fits in less time.

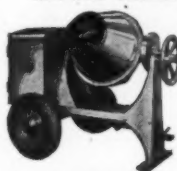
Then, too, the construction department knows ahead what its demands will be and notifies the supply department, so that the material, when needed, is ready. That saves on overhead. Delivery costs are cut one-half by taking numerous items to several jobs on one delivery. Such methods explain to a large extent the low cost of good construction in Fonde-built homes.

The new Highland Hills, as well as the other low-cost homes, have features usually found in much higher-priced homes. They include: kitchen full of cabinets, G-E automatic water heater, metal cabinet sink, four-piece bath with shower, tileboard walls in bath, built-in wardrobes, nice room sizes, and an automatic electric heater in each room.

Century Court, near new Highland Hills, was completed within recent months and people there are enjoying "better living" in low-cost homes. One of those completely electrical homes cost \$600 down and approximately \$43 per month. Taking just one home there as an illustration of what the construction included, these quality items are found: sturdy foundation, good poplar siding, copper sheet metal, copper water pipes, slate roof, beautiful yard, dry wall construction, best quality materials and appliances, electric heat in every room, electric dishwasher, electric garbage disposal, kitchen exhaust fan, attic exhaust fan, mercury light switches, lighted kitchen cabinets, door chimes.

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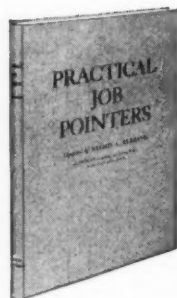
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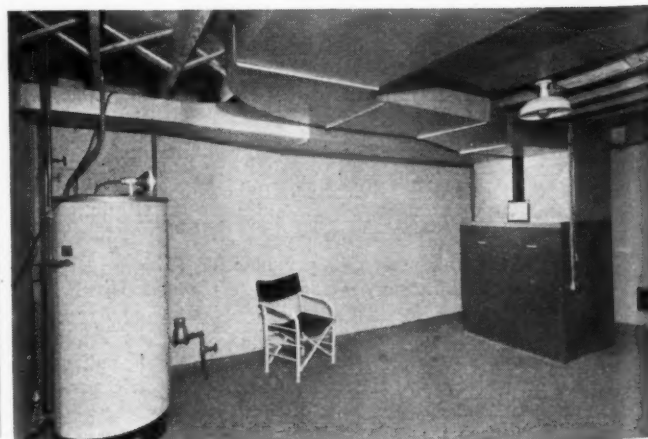
### Detroit Model Home—

(Continued from page 62)

and a bath. One bedroom measures 15 feet 8 inches by 12 feet 8 inches, and the other 13 feet 7 inches by 12 feet 4 inches.

The second floor plan takes care of the closet problem in super-abundant fashion. Each bedroom has, in addition to unusually generous closets, a wealth of storage space under the sloping roof adjoining the dormers in the front of the house. On either side of the dormer in the master bedroom are two storage spaces measuring 5 feet 3 inches by 2½ feet and 7 feet 8 inches by 2½

ABOVE: View of G-E model home showing porch end. Below, another view of the combination living-dining room, showing fireplace and flanking built-in cases; also another view of kitchen looking





feet. The two corresponding storage spaces in the other bedroom are 5 feet 7 inches and 5 feet 3 inches long.

The master bedroom also has a wardrobe which is 2 feet 4 inches by 5 feet 10 inches. Off the other bedroom is a closet nearly 6 feet square with shelves. There is also a second floor linen closet adjacent to the bath. The master bedroom features a recess for beds and night table with fluorescent reading light.

The problem of electrical outlets is amply taken care of by the following General Electric wiring standards for all homes which recommend sub-feeder circuits to prevent overloading, adequate convenience outlets properly spaced, and intelligent switch placement for both lighting and appliances.

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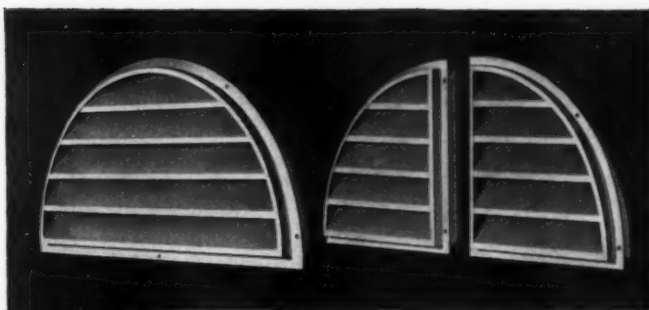
The kitchen arrangement, fourth "pet peeve," is one of the chief boasts of the Dearborn house. The complete equipment includes range, refrigerator, cabinets, dishwasher, Disposall, clock and ventilating fan.

In addition to space for a breakfast table and chairs, there is a lunch bar with three stools. Fluorescent lighting is also used in the kitchen.

A complete electric laundry, with washer, dryer and ironer, is in the basement. A laundry chute goes from the second floor to kitchen to basement laundry room.

The G-E equipment throughout the house includes oil-fired winter air conditioning, wiring, mercury switches, all-electric kitchen, attic ventilation fan, water heater, complete laundry, fluorescent lighting and exterior burglar floods switched on from bedroom to light the grounds.

toward dining room; the basement view in heating room indicates placement of electric water heater and oil-fired winter air conditioner. Another view of master bedroom (No. 2) appears below.



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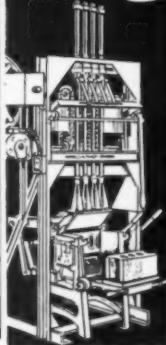
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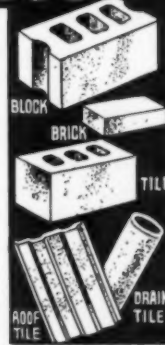


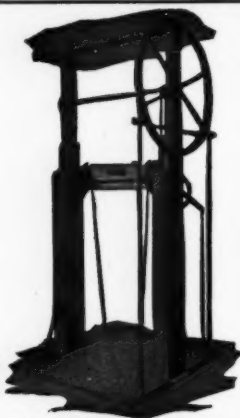
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## "TruCost" Estimating Figures for Home Designs in This Issue



The Editors have prepared a 28-page explanation of *American Builder's* "TruCost" system of quick, accurate estimating and offer it to anyone interested at 25 cents per copy. Please enclose payment when ordering. Address *American Builder*, 30 Church Street, New York City.

### Page 60, May: Petersen & Wolz, Archts.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 324 lin. ft.; Garage Floor, 253 sq. ft.; Outside Walls, 28.00 sqs.; First Floor, 13.00 sqs.; Ceiling, 13.00 sqs.; Roof Pitch, 5" rise per ft. run; Roof, 24.00 sqs.; Hips and Valleys, 48 lin. ft.; Cornice, C & F, 300 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door, 8 ft. wide, 1; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 17 opgs.; Chimney, 18 lin. ft.; Porch Floor, 3.00 sqs.; Porch Ceilings, 3.00 sqs.; Porch Beam, 60 lin. ft.; Porch Post and Newels, 6; Porch Roof, 3.00 sqs.; Porch Cornice, 40 lin. ft.; Porch Rail, 36 lin. ft.

### Page 63, May: Civkin, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 124 lin. ft.; Trench Walls, 80 lin. ft.; Basement Floor, 775 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 36 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 7.75 sqs.; Second Floor, with fin. flg., 5.75 sqs.; Second Floor, without fin. flg., 2.00 sqs.; Ceiling, 15.50 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 24 lin. ft.; Cornice, C & F, 260 lin. ft.; Partitions, 250 lin. ft.; Inside Finish OS Walls, 224 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 23 opgs.; Windows and Casements, 22 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, 1.10 sqs.; Porch Ceilings, 1.10 sqs.; Porch Beam, 90 lin. ft.; Porch and Balcony Post and Newels, 5; Front Porch Roof, .50 sqs.; Porch Cornice, 20 lin. ft.

### Page 64, May: Fonde & Son, Bldrs.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 190 lin. ft.; Garage Floor, 204 sq. ft.; Outside Walls, 18.00 sqs.; First Floor, 10.00 sqs.; Ceiling, 12.00 sqs.; Roof Pitch, 5" rise per ft. run; Roof, 15.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 110 lin. ft.; Inside Finish OS Walls, 130 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade

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**Page 65, May: Fonde & Son, Bldrs.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 180 lin. ft.; Utility Floor, 50 sq. ft.; Garage Floor, 180 sq. ft.; Outside Walls, 24.00 sqs.; First Floor, 9.00 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 32 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 110 lin. ft.; Inside Finish OS Walls, 130 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 3 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 11 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 24 lin. ft.; Porch Floor, 1.25 sqs.; Porch Ceilings, 1.20 sqs.; Porch Beam, 16 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.60 sqs.; Porch Cornice, 16 lin. ft.

**Page 68, May: Laydon, Bldr.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 750 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 8.00 sqs.; Second Floor, with fin. flg., 5.50 sqs.; Ceiling, 15.30 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 15.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 14 opgs.; Windows and Casements, 21 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .25 sqs.

**Page 69, May: Laydon, Bldr. (4-Room)**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 750 sq. ft.; Garage Floor, 180 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 8.00 sqs.; Second Floor, without fin. flg., 6.00 sqs.; Ceiling, 9.80 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 15.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 19 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .36 sqs.

**Page 69, May: Laydon, Bldr. (6-Room)**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 108 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 750 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 8.00 sqs.; Second Floor, with fin. flg., 5.00 sqs.; Ceiling, 13.00 sqs.; Roof Pitch, 9" rise per ft. run; Roof, 11.00 sqs.; Cornice, C & F, 160 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 200 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 17 opgs.; Windows and Casements, 20 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .60 sqs.

**Page 82, May: Bramberg, Bldr.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 124 lin. ft.; Trench Walls, 62 lin. ft.; Basement Floor, 872 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 37 cu. yds.; Outside Walls, 24.00 sqs.; First Floor, 8.40 sqs.; Second Floor, with fin. flg., 8.20 sqs.; Ceiling, 19.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 13.00 sqs.; Cornice, C & F, 190 lin. ft.; Cornice, 6", 92 lin. ft.; Partitions, 218 lin. ft.; Inside Finish OS Walls, 350 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 20 opgs.; Windows and Casements, 29 opgs.; Gable Sash and Louvers, 1 opg.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .50 sqs.

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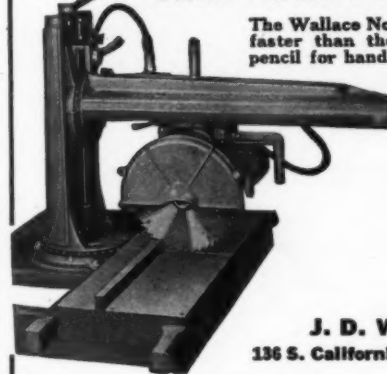


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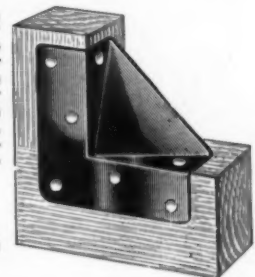


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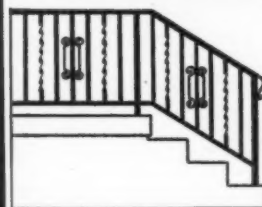
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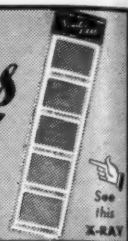
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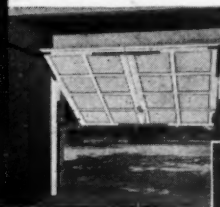
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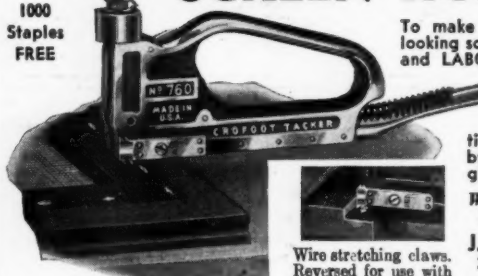
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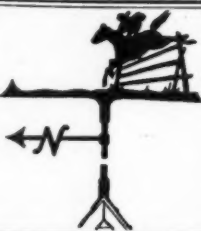
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